JULY 1950

ARMY INFORMATION DIGEST

This Healthy Army
Major General Raymond W. Bliss

The New Military Justice Code

Food Buying for the Armed Forces

Training for Military Government

The Men Behind the Guided Missiles

Airborne Assault in Exercise Swarmer

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JOINT CHIEFS OF STAFF TEAMWORK

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ARMY
INFORMATION
DIGEST

The ARMY INFORMATION DIGEST, an official Department of the Army publication, is published monthly under the supervision of the Commandant, Armed Forces Information School, Carlisle Barracks, Pennsylvania, on behalf of the Chief of Information, Department of the Army. The DIGEST provides timely and authoritative information on the policies, plans and operations of the Department of Defense, the Department of the Army, the other services and their reserve components. Material in The DIGEST may be reprinted with credit to The DIGEST and to the author.

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ARMY LANDMARKS

With this issue, The DIGEST inaugurates a series of sketches of Army landmarks that have figured in the military history of the Nation. A brief story of Governors Island and Fort Jay, with an illustration of historic Castle Williams, appears on the back cover.

SECURITY AT SWARMER

During Tarheel I, the 1949 forerunner of Swarmer, it was found that all field security precautions were brought to naught by the ubiquitous soft drink truck, a brightly painted vehicle that led the Aggressor to troop concentrations as surely as a red arrow on an intelligence overlay. The result: All such trucks were banned from the battle area during Swarmer and thirsty troops drank water in the cause of security. An account of Exercise Swarmer appears in this issue.

ANNIVERSARIES

Among the Army branches currently celebrating 175 years of service are the Army Medical Department and the Quartermaster Corps. In this issue Major General Raymond W. Bliss, The Surgeon General, tells why we have the healthiest Army in the history of the world. A vital phase of QM operations is covered in "To Market—To Market," detailing how the QM Market Center System procures perishables for the Armed Forces food basket.

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Vol. 5 No. 7 July 1950

CONTENTS

Page

This Healthy Army 3
By Major General Raymond W. Bliss

The Military Justice Code and You 8
By Felix E. Larkin

Swarmer—A Pattern for Airborne Assault 13
By Major Hunter M. Brumfield

Whale Hunting with the Japanese 23
By Lieutenant Colonel Chester A. Lee

"To Market, To Market . . ." 28
By Colonel Charles F. Kearney

Milestones (Pictorial Section) 35

Teamwork Under the Joint Chiefs of Staff 45
By Captain Steve W. Mulkey

Training for Guided Missile Warfare 53
By Lieutenant Colonel Gwinn U. Porter

Peacetime Military Government Training 59
By Lieutenant Colonel George F. Havell

U. S. Army Photograph

MEDICAL DEPARTMENT CHIEF

Major General Raymond W. Bliss, The Surgeon General, received his medical degree from Tufts Medical School in 1910. He was later graduated from the Army Medical School in 1913 and commissioned first lieutenant in the Regular Army. During World War I he was commanding officer of the base hospital at Camp Wheeler, Georgia. He was later Chief Surgeon at Sternberg General Hospital, the Philippines; at Fort Sam Houston; and at William Beaumont General Hospital, El Paso. In 1942 he was named Surgeon of the First Army and Eastern Defense Command. He was appointed the Chief of Operations, Surgeon General's Office, in 1943, and Assistant Surgeon General in 1944. During World War II, he made extensive tours of the Pacific areas, later serving as an observer at the atomic bomb tests at Bikini. He was appointed to his present post in June 1947.

THIS HEALTHY ARMY

By

MAJOR GENERAL RAYMOND W. BLISS
The Surgeon General, United States Army

AS the Army Medical Department celebrates its 175th anniversary on 27 July, it points with a feeling of satisfaction to a signal achievement—that the United States Army today is healthier than at any previous time in its history. It is a safe assumption to state that we now have the healthiest army in the history of the world.

This achievement did not come about suddenly and spectacularly. It is largely the result of 175 years of experience, investigation, experimentation, education and cooperation in keeping abreast of all the advances in contemporary medicine. Much of the credit belongs primarily to those who have made the health of the Army their life-long concern—the members of the Army Medical Department. Much of this progress can be attributed to the Department's emphasis on preventive medicine and programs of research and training.

A few figures comparing the health status of the Army in 1949,* preliminary figures for which are now available, with the situation just one decade ago, in 1939, highlight the improvement that has been scored in recent years. The comparison is particularly apt, since 1939 was the last pre-war year in which the Army was composed entirely of volunteers, as it largely was last year.

In making the comparison, however, it should be borne in mind that the task of the Army Medical Department has become infinitely more complex than it was in 1939. Whereas in 1939 the word "overseas" meant only Hawaii, Panama, Puerto Rico, Alaska, China and the Philippines, in 1949 it included in addition Germany and Austria, Italy and Trieste, Greece and Turkey, Japan and Korea, and Pacific islands such

* Until 1 July 1949 the Army Medical Department served the Air Force as well as the Army. The statistics for 1949 therefore include both services for the first six months and the Army only for the latter half of the year.

as Okinawa. Moreover, a greater percentage of the Army's total strength was overseas in 1949 than in 1939. Many of these troops today are stationed in areas where certain diseases have been endemic for decades, and even in some regions where medical care, sanitation and the most rudimentary principles of hygiene were almost totally unknown to the native populations until the United States Army arrived on the scene.

In military parlance, the "noneffective" rate measures the strength of the Army that is not available for duty because of illness in hospital or quarters. In the last ten-year period, the Army's noneffective rate has gone down from 26.6 to 21.5 per 1000 strength. This is particularly impressive when its significance is grasped: that on the average day in 1949 there were 4500 fewer troops off duty because of sickness or injury than would have been the case had the 1939 rate still prevailed. Aside from the improvement in individual well-being, the saving to the Army and the Nation in terms of manpower and money is obvious.

Much of this achievement may be credited to that branch of science of which the Army has been a leading exponent—preventive medicine. Especially illustrative of the value of preventive measures is the drop in the incidence of the respiratory diseases. Whereas in 1939 the admission rate of common respiratory infections and influenza totalled 111 per 1000 troop strength per year, in 1949 it had dropped to the low mark of 77.

The Medical Department has been dramatically successful in attacking the venereal disease problem. New drugs and techniques for the cure of these diseases have been developed. In 1939, out of every 10,000 troops in the Army on an average day, 34 were absent from duty because of venereal disease. By 1949 this figure had been reduced to four. Ten years ago the average venereal disease patient required 42 days of medical care. Last year the average time lost per patient was less than three days.

In any analysis of health trends, the mortality rate is an important factor. In the ten years since 1939, the Army death rate due to disease has gone down from 1.55 per 1000 strength per year to .53, a difference in terms of human lives which becomes impressive when the full strength of the United States Army is considered. In essence, this means that the probability of a soldier dying of disease was only one-third as high in 1949 as in 1939.

The death rate from all causes declined in the same period from 3.05 to 1.97—an improvement which would have been even better except for a rise in deaths from injuries overseas. It should be noted that this overall figure includes persons who died in accidents, plane crashes and the like, before reaching medical aid.

The doctrine of preventive medicine is implicit in the physical examinations given before induction, periodically during service, and prior to retirement or discharge. It is the guiding purpose behind sanitary engineering, vaccinations and inoculations, and periodic dental examinations. It manifests itself in rigid veterinary inspections to insure wholesome food. Preventive-minded sanitary inspectors and officers see to it that food is properly prepared and served to meet the minimum standards of caloric and vitamin content recommended by the Medical Department nutritionists. In short, preventive medicine pervades the whole structure of the Army Medical Department.

Among the advances in preventive medicine scored in the period since 1939 are many that were spurred by wartime necessity. Among these developments, beneficial both to the Army and to the Nation at large, was the introduction of tetanus toxoid, now administered to every member of the Army. Tetanus, or lockjaw, has long been a dreaded scourge of armies in the field. Yet due to the development of this toxoid, the Army went through the entire World War II period with only twelve cases of tetanus, only four of which occurred in soldiers who had been properly immunized.

All Army personnel now receive this protection routinely, as well as vaccinations against smallpox, typhoid and paratyphoid fever. In addition, immunization to louse-borne typhus, cholera, plague, yellow fever, influenza, diphtheria, Rocky Mountain spotted fever and Japanese encephalitis is administered when conditions indicate its need.

One of the greatest disease preventive developments of the past decade was DDT, used for controlling flies, mosquitoes and other insect carriers of death. Armed with this potent weapon, the Army's physicians, sanitary engineers and entomologists have sharply reduced the incidence of insect-borne diseases. In the new insecticides, the Army now has a weapon of enormous power for the control of mosquitoes which transmit such diseases as malaria, dengue, yellow fever and filariasis. The effect of these measures in conjunction with fly-proofing

and screening is dramatic. DDT played an important part in making the United States Army in World War II the first in history to lose fewer men to disease than to bullets.

Medical research—another pillar of Army medicine—is concerned with problems specifically or primarily of military concern. It often complements, but never competes with, civilian research. Research activities are carried on under the jurisdiction of the Medical Research and Development Board in the Office of The Surgeon General, by the Army Medical Department Research and Graduate School at the Army Medical Center in Washington, at other military installations and in civilian laboratories.

One of the most important postwar results of military medical research is chloramphenicol, one of the new wonder drugs. First tested and proved effective against a disease of primarily military significance—scrub typhus, endemic in the southwest Pacific area—chloramphenicol has since become a weapon against typhoid fever, Rocky Mountain spotted fever and cholera. Other important developments for which the Army Medical Department has been wholly or partially responsible include streptomycin, another of the wonder drugs; dramamine, a preventive and cure of seasickness; and the vaccination against Japanese encephalitis which protects every soldier serving in the Pacific area.

Occasionally, as happens in all fields of research, investigators looking for one thing find something unexpected—and surprisingly useful. While conducting research into communicable diseases, Army scientists discovered that an antibiotic, actidione, is so detested by rats and mice that they will not gnaw through paper painted with it. They will actually die of starvation or thirst rather than eat or drink anything containing actidione. This discovery, besides its value in preventive medicine, should result in savings of millions of dollars every year in property contaminated by rodents.

Of peculiar importance to the life and comfort of the soldier, although practically unknown to him, is the Army Industrial Hygiene Laboratory. Here is conducted the testing of literally thousands of articles for the specific purpose of assuring that the equipment of the Army is safe to use. Everything that a soldier will touch in the normal course of his specialized Army job—even the air he breathes in the closed cabs and bodies of military vehicles and in military shelters—is analyzed as a precautionary measure.

Army medical, dental and allied research is concerned with more than just the strictly preventive phases of health. Improved contact lenses, hearing aids and artificial limbs have been developed. Work is going on in new methods of treating diseases of military significance, such as infectious hepatitis and dental caries. New types of medical equipment, such as mobile hospitals, compact dental operating equipment and field x-ray units are being tested. Important advances are reported in the field of nutrition, in veterinary medicine, and, of increasing importance at the present time, in the handling of the thousands of thermal burn casualties that can be expected if an atomic war should occur.

In the latter connection, the Army researchers already have developed a new, simple burn dressing that will be especially practical for first aid in the field as well as in the hospital. They report new ways of using antibiotics to prevent certain types of infections, such as gas gangrene, and methods of disinfecting plasma by ultraviolet light. They are studying how to preserve red blood cells so that adequate amounts of whole blood can be made available in emergencies. Blood substitutes are being investigated. Burn damage to lungs, kidneys, liver and skin is receiving the attention of the experts. New ways of alleviating pain in burn cases also are being developed.

With its heritage of accomplishments covering 175 years of service, the Army Medical Department enters the final quarter of its second century with unflagging determination to advance still further toward its constant goal: the healthiest army in the history of the world.

Reprints of this article available upon request.

AID

THE BASIS OF LEADERSHIP

Leadership in modern war is more than drawing sword and fearlessly galloping off at the head of a troop, though there still is no substitute for that type of courage when necessity demands it. Leadership normally begins with a sense of confidence born out of knowledge and experience. Our Armed Forces are engaged in seeing to it that their officers acquire both these prerequisites.

The Honorable Louis Johnson, Secretary of Defense

THE MILITARY JUSTICE CODE AND YOU

By

FELIX E. LARKIN

In the April 1949 issue of the ARMY INFORMATION DIGEST, Felix E. Larkin, General Counsel of the Department of Defense, discussed the important features of the Uniform Code of Military Justice, then being considered by the Congress. With the recent passage of Public Law 506—81st Congress, and its approval by the President, the new Code is scheduled to go into effect on 1 June 1951. In the following article Mr. Larkin outlines the changes that will be made and points up the major ways in which the new Code differs from the amended Articles of War currently in effect.

SO FAR as the application of the Uniform Code of Military Justice (UCMJ) is concerned, it makes very little difference whether you are in the Army, the Navy, the Air Force, the Marine Corps or the Coast Guard. The Code is uniform for all the services and it will have a single uniform *Court-Martial Manual* to implement it. This *Manual,* now in the process of preparation, should be published in plenty of time for you to examine it before June 1951. The changes that you will find in the Code will vary, of course, depending upon whether you are now subject to the Articles of War or the Articles for the Government of the Navy.

Assume that you are the commanding officer of a unit and one of your men has committed an offense. The action that you take under the Uniform Code is substantially the same as under the Articles of War, with these differences:

If the offense is a minor one, you may decide that it can be handled by company punishment, which under Article 15 of the Code is called "commanding officer's non-judicial punishment." Under this Article you may find that you have even broader authority. (I say "may" because the Article contains an express provision to the effect that the broad powers it grants may be cut down by the Departmental Secretary.)

Article 15 of the Code differs from Article of War 104 in

that it authorizes you, as a commanding officer, to withhold the privileges of any officer of your command for two weeks or to restrict him to limits for the same period. If you are an officer exercising general court-martial jurisdiction, you may order the forfeiture of half his pay for one month. Furthermore, it increases from one week to two the period during which an enlisted man may lose his privileges, be restricted to limits, or be awarded extra duties. In addition, if you are at sea, you may confine an enlisted man for seven days or you may put him on bread and water for three days. UCMJ Article 15 also requires that, if there is an appeal, it shall be promptly forwarded to and decided upon by superior authority and that all rights, privileges and property affected shall be restored should superior authority set the action aside.

If, on the other hand, the offense is a serious one, you may feel it necessary to place the accused under some sort of restraint. Under the Code, the technical term for picking him up is "apprehension." You cannot apprehend him except on reasonable belief that he has committed the crime in question. Once he has been apprehended, you can restrain him by placing him either in "arrest" or "confinement." Once you have done this, you must inform the accused of the specific wrong of which he accused. It is not enough just to tell him that he has violated the General Article (which, by the way, is now UCMJ Article 134).

If it is decided to convene a general court-martial to try the accused, there are a number of provisions in the Code with which you should be thoroughly familiar. In the first place, if the accused is an enlisted man and demands enlisted men on the court, he can have them in the same way provided under the amended Articles of War—that is, one third of the court *must* be made up of enlisted men—with one new exception. That exception—included to take care of small Navy ships at sea and small isolated shore units such as weather stations—provides that if the only enlisted men available are men from the same unit as the accused, he may be tried by an all-officer court. In such a situation, however, you will have to make a full written explanation as to why no other enlisted men were available and attach it to the record.

When, in convening this general court-martial, you appoint defense counsel and trial counsel (the new name for the trial judge advocate), each officer that you select must both be certified as competent by the Judge Advocate General and must

also be either a member of the bar or a judge advocate (the Navy calls him a law specialist) with a law degree. Furthermore, instead of appointing a law *member*, you will appoint an official with somewhat different functions known as the law *officer*. His functions will be closer to those of a civilian judge, for he will not retire with the court during its deliberations and will not have a vote. The main purpose of this change is to make certain that the instructions to the court on the law are on the record and subject to review. He will continue to rule on questions of evidence and will charge the court prior to their deliberations.

Consider the trial procedure from a different point of view. You are now counsel for the accused. If it is a general court-martial and your assistant is not himself a fully qualified lawyer, he cannot take over in your absence. You naturally will be interested in some of your client's new rights. (By "new" I mean that they were not spelled out in the amended Articles of War.) They include: (1) an equal opportunity with the prosecution to obtain witnesses and other evidence; (2) the right in peacetime to at least three days after the service of charges to prepare for a *special* court-martial; (3) the right to be informed of the findings and sentence of the court once they are determined; (4) the right to receive a copy of the record of trial in either a general or special court-martial case; (5) the right to attach to the record a brief of such matters as you think should be considered on review, including any objection you may have to the contents of the record.

The other provisions in the new Code which relate to trial procedure are derived substantially from the Articles of War. The provision in the Articles of War prohibiting unlawful influence of the court—a provision aimed at "command control" by the convening authority—has been considerably strengthened. It prohibits censuring the court with respect to any judicial action that it takes or attempting to "coerce, or, by any unauthorized means, influence the action of a court-martial . . . in reaching the findings or sentence." Teeth have been put into this provision by a punitive article (UCMJ Article 98) which makes it an offense knowingly to violate the procedural provisions of the Code.

The double jeopardy provisions have been strengthened to provide that an accused cannot be tried a second time in instances where the case is stopped in mid-trial because the

authorities realize that there is not enough evidence to convict or where the case is reversed on appeal for the same reason.

All cases, whether heard by general, special or summary court, are reviewed by the convening authority. Furthermore, they all must be reviewed by a judge advocate or a law specialist.

The Code makes a sharp distinction between three elements of the court-martial action to be reviewed. The first is the determination of questions of law; the second is the determination of questions of fact; and the third has to do with the appropriateness of the sentence. The convening authority may act with respect to all three. He may throw out a conviction because it is illegal (question of law). Or he may throw out a legal conviction on the ground that he just does not believe the testimony of one of the witnesses (question of fact). Finally, he may allow the conviction to stand but may reduce the sentence in any amount that he feels proper.

Conviction by a general court-martial of a general or flag officer or a sentence extending to death or dismissal or dishonorable or bad-conduct discharge or confinement for one year or more, if approved by the convening authority, will automatically go to a Board of Review in the office of your Judge Advocate General. That Board is empowered to consider all three elements—the questions of fact, the questions of law, and the appropriateness of the sentence.

Article 70 of the Code should effect quite a change in procedures before the Board. It provides that you may have counsel appointed to represent you in the hearing of your case. The Government is also entitled to counsel. Thus the Board of Review will have both sides of your case developed for it in an adversary type of proceeding which is more akin to procedures before civilian appellate courts.

A decision by the Board of Review of any service may be appealed to a single court of three civilian judges, which sits over all the services and is known as the Court of Military Appeals. This Court, before which appellate counsel may also appear, is limited in its review to matters of law only. It cannot consider questions of fact or the appropriateness of the sentence. The final authority with regard to the sentence is the Secretary of the appropriate Department, subject, of course, to the President's general pardoning power under the Constitution and the requirement that no death sentence shall be executed until approved by the President. The power to act

with respect to the finding of guilt or innocence is taken away from the Secretary of each Department so that he no longer has his former authority with respect to questions of law and fact.

A new provision in the Code protects the accused if the sentence, though approved, is suspended. That suspension cannot be vacated at the whim of the commanding officer, for the Code provides that prior to revoking the suspension there must be a hearing with regard to the alleged violation of probation.

Finally, the Code removes the limitations upon transferring military personnel to Federal institutions. This enables the services to transfer to specialized Federal institutions those hardened criminals whom they wish to keep from contact with prisoners who can be rehabilitated.

Three other points of the Code are of special significance. First is the provision which, under special regulations of the President, would allow a court-martial of one service to try an accused from another service. This is designed to meet an obvious necessity arising in joint operations. A person so tried will have his case reviewed on appeal by his own service.

Second, while persons subject to the Code are, in general, the same as provided in the Articles of War, these exceptions apply: The new Code has jurisdiction over reservists on inactive duty training in instances where they are informed that they will be subject to the Code, and they voluntarily agree to become subject to the Code. This provision is designed to enforce the discipline necessary where such training involves the use of dangerous and expensive equipment. It might be used, for example, in the week-end flight training program. The other important exception is found in UCMJ Article 3, which provides that persons who commit serious crimes while they are in the service—crimes which are not discovered until they are discharged or go on inactive duty—can still be tried by court-martial if there is no way of trying them for the crime in a civilian court. This will take care of serious thefts committed by an individual overseas, for example.

Third, the new Code contains a combination of Punitive Articles from both the Articles of War and the Articles for the Government of the Navy. The Punitive Articles now present much more complete definitions of civil crimes and are organized in the manner of a modern criminal code. The maximum punishments are still left to the President and will be specified in a table in the new *Manual.*

SWARMER—A PATTERN FOR AIRBORNE ASSAULT

By

MAJOR HUNTER M. BRUMFIELD

THE pattern that had been traced at Sicily, Normandy and Arnhem—parachuting troops and supplies astride strong enemy positions—unfolded over the North Carolina sandhills. Streams of parachutes burst into silken canopies to deliver the United States Forces deep into Aggressor-held territory. Individually, the elements making up Exercise Swarmer were familiar; but in overall purpose, this operation was different. Joining the familiar elements in one gigantic action, with more than 30,000 troops and 22,000 tons of materiel moved in by air, marked it as an unprecedented landmark in the history of warfare. For the first time, the Army and Air Force pooled their resources in a maximum effort to test the feasibility not only of seizing an airhead but also of developing it into a major island of offensive action. In the full-scale action, a corps of two divisions was supplied entirely by air as it struck at an enemy beachhead.

Marshalling the cream of Air Force and Army command and planning resources and with tactical air and ground forces supported by provisional logistical elements, the joint exercise established the fact that the United States Armed Forces are capable of meeting successfully the most strenuous demand of modern war—the creation and exploitation of an airhead behind the enemy's lines.

Exercise Swarmer involved these primary missions: to study the organization and operation of an airhead, to develop aerial resupply procedures and techniques, to train Army and Air Force units and staffs in air-ground and airborne operations, to test close air support methods, special equipment and new developments in weapons, to provide joint training and practical experience in operation of a joint maneuver

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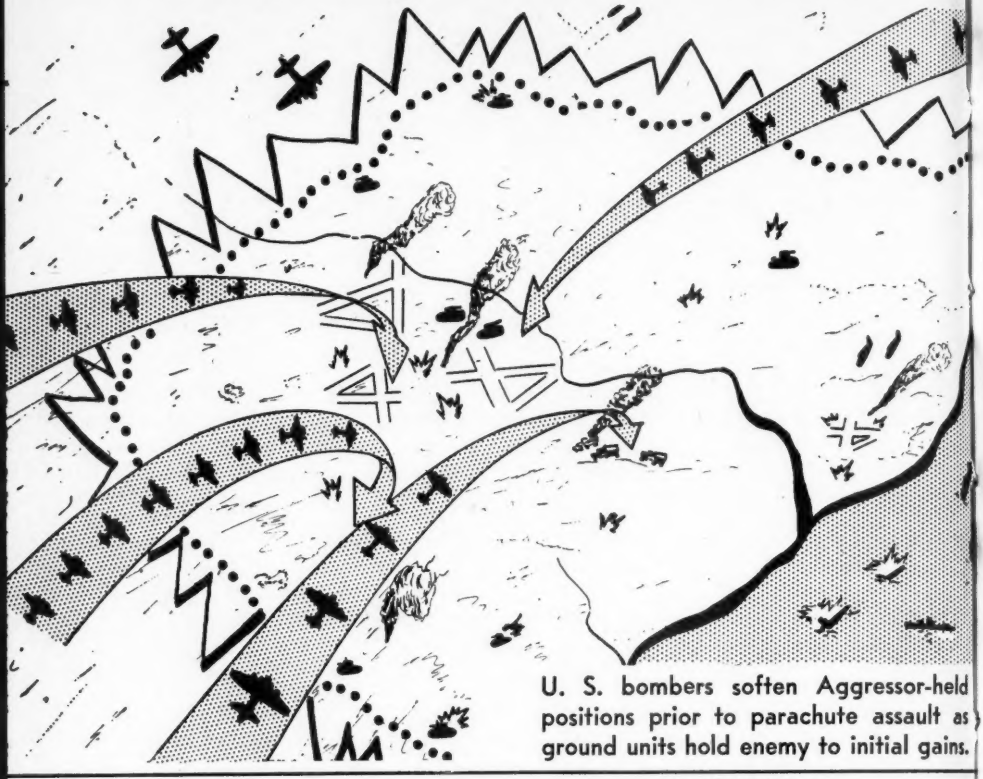
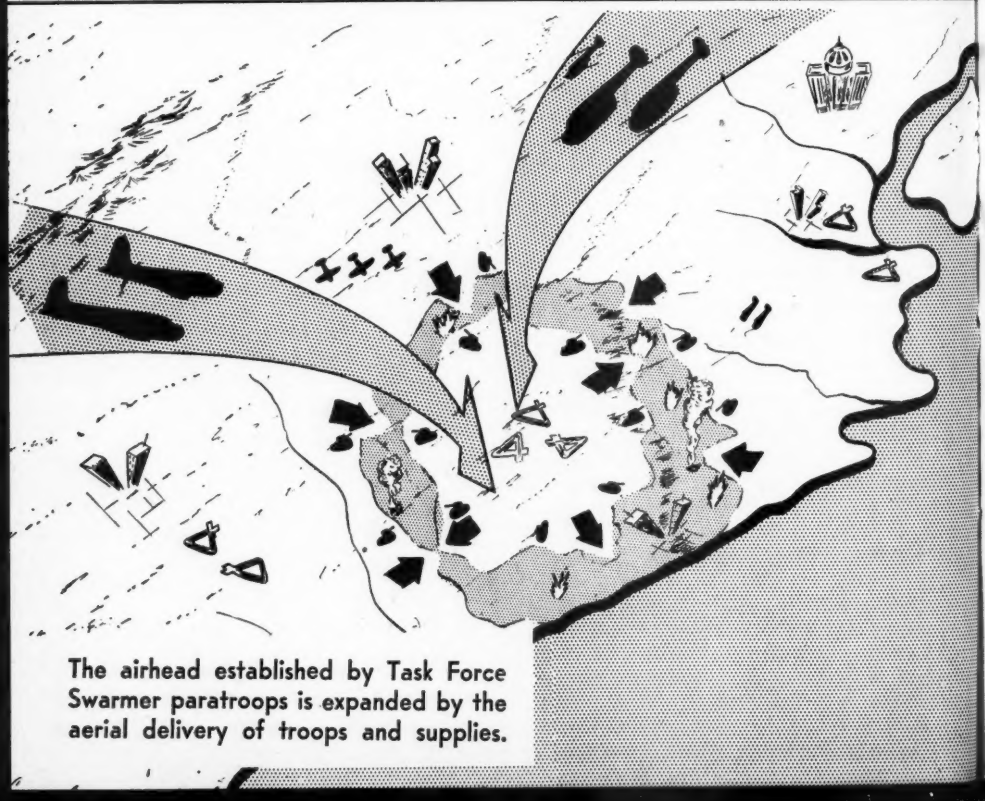
MAJOR HUNTER M. BRUMFIELD, Inf., is an Associate Editor, ARMY INFORMATION DIGEST.

Establishing the Swarmer Airhead



U. S. bombers soften Aggressor-held positions prior to parachute assault as ground units hold enemy to initial gains.



The airhead established by Task Force Swarmer paratroops is expanded by the aerial delivery of troops and supplies.

headquarters, and to evaluate the training proficiency of participating units with a view to determining the need for further training for combat readiness.

Setting the stage for the action to follow, the mock situation in mid-April showed that Aggressor had made three major landings in the Southeastern United States. The Florida peninsula was almost completely in enemy hands, another invasion was under way in the Alabama-Mississippi sector, and a third landing had gained a firm foothold on the North Carolina coast, moving inland to threaten the Winston-Salem industrial area and pointing a menacing finger toward the Nation's capital.

With the Aggressor penetration into the Carolinas, Task Force Swarmer was organized to counter this move with an airborne operation. Its purpose was to secure the Camp Mackall - Fort Bragg - Fayetteville, North Carolina, area and dislodge the enemy from the Atlantic seacoast. Task Force Swarmer, comprised of V Corps and the Tactical Air Force (Provisional), was supported logistically by the Carolina Base Section. The V Corps included the 82d and 11th Airborne Divisions reinforced with the 3d Infantry Division (on a command post exercise basis only) and with token representation of National Guard elements. Troop carrier units and Military Air Transport Service planes were pressed into action to provide an aerial bridge for delivery of troops, equipment and supplies.

During the week before D-Day, United States Force fighters and fighter-bombers criss-crossed the penetration zone in retaliatory action against the enemy. Aggressor communications and transport were destroyed and his rear areas demoralized as friendly ground troops held him to initial gains. Meanwhile, air superiority was wrested from Aggressor preparatory to the airborne assault on the center of enemy territory.

By D-Day on 28 April, some 60,000 Army, Air Force and Marine Corps troops were poised at bases as far distant as 500 miles from Camp Mackall in readiness for the all-out counteroffensive. Minutes before H-Hour on D-Day, large formations of bombers and fighter-bombers strafed and bombed enemy positions around the Camp Mackall airfield. With Aggressor troops momentarily paralyzed, fighter-protected C-82 Flying Boxcars and the newer C-119 Packet transports disgorged nearly 2000 paratroopers of an 11th Airborne Division Regimental Combat Team onto the Luzon Drop Zone near the air-

field. Swiftly disentangling themselves from their parachutes, the air-delivered infantrymen were set for battle. Such cumbersome items as jeeps, borne by huge parachutes, drifted to earth, ready for immediate use. Artillerymen unlimbered 75mm and 105mm howitzers—also air-dropped—to return the Aggressor barrages. Friendly forces quickly routed the opposition in the vicinity of the abandoned airstrip. Within four hours Marine Corps transport aircraft were landing there safely, bringing in heavy engineer equipment to be used in readying the strip for the heavier air traffic that would follow.

With the airstrip now secure, it was possible to land troops by plane. The other RCT of the 11th Airborne Division was air-landed at Mackall later that day from Fort Campbell, Kentucky—a distance of 450 miles. Along with an RCT of the 82d Airborne Division—also air-landed—they soon joined the battle. Another RCT of the 82d jumped onto Holland Drop Zone the afternoon of D-Day to bring additional pressure against the defending Aggressor units.

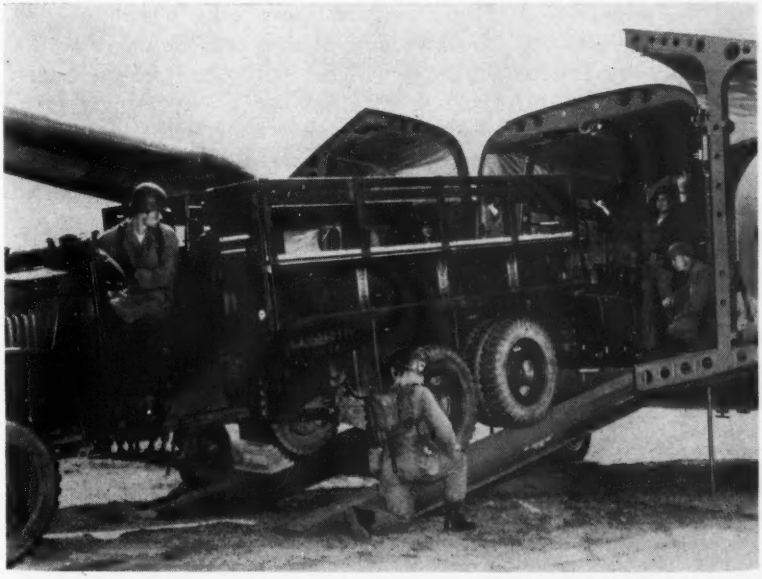
By 1330 on D-Day, the airlift for Exercise Swarmer was under way. With variations, the familiar pattern of Operation Vittles was reenacted. This time, however, instead of flying in standard cargoes of food and fuel as was the case in Berlin, Swarmer planes delivered all the materiel needed by ground troops to wage a full-scale campaign—and this despite enemy aerial and ground opposition. This was unlike the Normandy campaign, too, for in that instance airborne troops expected to be joined quickly by friendly units storming inland.

Virtually every pound of equipment and supplies, both actual and simulated, was brought into the Swarmer airhead by air—including even the uncannily agile fork lift trucks that aided in the unloading operations. Within 24 hours huge transports were landing on the 5000-foot runways at three-minute intervals with clock-like regularity. Operations at the Mackall airfield were so geared that as an incoming plane touched the ground, one that had unloaded its cargo or passenger load was in position to take off.

As the newly seized airhead expanded, the combat units began receiving reinforcements in troops and equipment airlifted from Greenville Air Force Base, South Carolina, and from Maxton AFB near Laurinburg, North Carolina. Aggressor air and ground units were able to inflict some damage on the air train, but United States fighters and bombers succeeded in maintaining essential air superiority.

Early in the maneuver, elements of the 82d and 11th Airborne Divisions were harrassed by strong Aggressor tank forces who met little resistance because adequate antitank weapons had not yet reached the friendly troops. This lack of armor and heavy antitank support was partially overcome by the prompt response of United States jets hovering in the vicinity. Rocket and cannon fire from these jet planes was directed against enemy tanks by Air Force forward control personnel operating with advanced ground units. Twenty Air Force officers, who had completed the parachute course at Fort Benning, jumped with the paratroopers to bring close air support missions onto designated targets.

An additional paratroop assault by an RCT of the 82d Airborne Division on D plus 2 near Pope AFB caught Aggressor by surprise. This action, coupled with the rapid deterioration of enemy resistance elsewhere in the airhead, hastened the capture of the second airfield a full day earlier than had been expected. With both the Pope and Mackall landing fields now available as debarkation points for supplies, the operation settled down to a matter of aerial logistics. Because of the rapid capture of Pope AFB, plans to resupply forward



Department of Defense Photograph

Members of the 82d Airborne Division load equipment in an Air Force C-119 transport in preparation for Exercise Swarmer.

units by dropping heavy equipment, ammunition, food and fuel were changed. Troops participating in the D-Day paradrop had carried a three-day supply of rations and ammunition. By D plus 3 they were receiving adequate resupply through the air conveyor belt now operating full force into the two landing fields.

Although Exercise Swarmer was a training maneuver spectacular in its scope and newness, it was primarily a test for the benefit of top Armed Forces planners seeking to establish doctrine which will govern the conduct of war operations in the supersonic and atomic age. Valuable lessons were learned. From the standpoint of results achieved, Swarmer is already being hailed as one of the most significant maneuvers that the Armed Forces have conducted in recent years.

Drawing on the Swarmer experience, the maneuver commander, Lieutenant General Lauris Norstad, USAF, recommended that an airborne corps supported by a tactical air force be organized, prepared to conduct such combat operations as were practiced in Exercise Swarmer with a minimum of delay. This task force, composed of air and ground elements, would train in joint exercises. The force would be ready to project United States striking power against any area where needed —either on distant oversea land masses or defensively on Western Hemisphere territory, whichever the case might be.

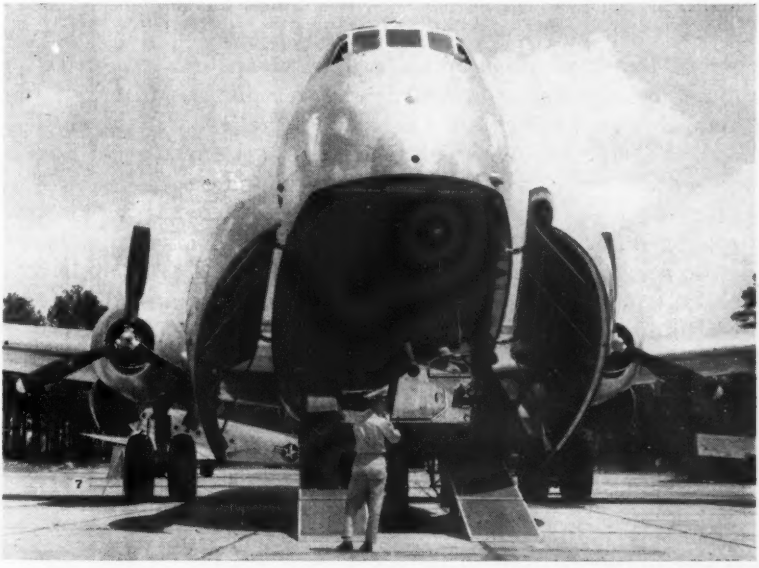
One of the lessons learned was that the Berlin Airlift technique of supplying an isolated zone does not necessarily apply under battle conditions against a powerful enemy force. In the first place, planners contend, superiority in the air is an overriding prerequisite in establishing and maintaining an airhead deep in hostile territory. And the protection of the air corridor requires constant fighter plane cover since the breakthrough of only a few enemy interceptors could play havoc with the extended aerial supply line.

The test demonstrated that many of the present United States Air Force transport-type aircraft are not entirely suitable for hauling certain type weapons and vehicles required by fighting troops. Although the C-54 and C-74 transports performed admirably as workhorses in delivering the bulk of the supplies, it was the C-82 and C-119 with their end-loading features and heavy payload capabilities that proved to be the preferred transports for combat logistical support. These types of aircraft are in relatively short supply and many more are required if similar operations are to be conducted on an

extensive scale at more remote points. The giant C-124 transport demonstrated at Swarmer provides one solution to the problem of delivering such heavy equipment as tanks, larger caliber artillery and heavy vehicles into the battle zone.

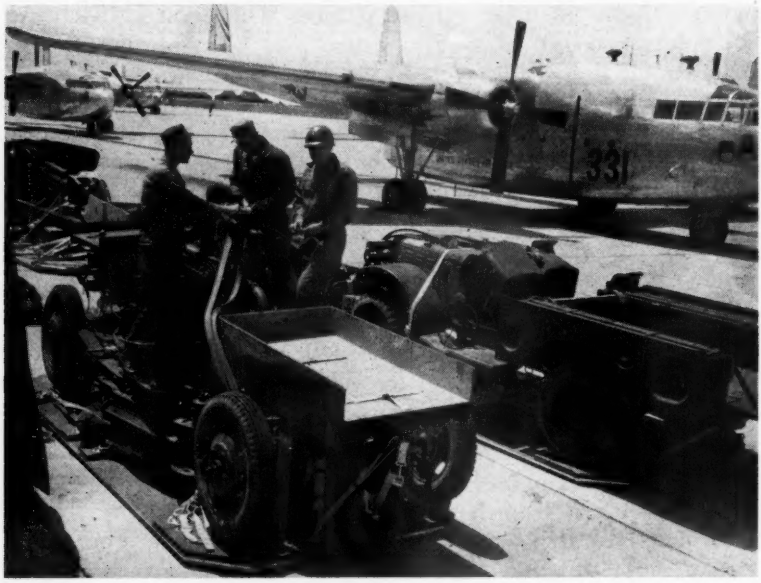
The exercise further pointed up the lack of sufficient electronic devices for early warning against enemy air activity. Most radar equipment employed during Swarmer was of World War II vintage, not geared to track the fast jets that would be used in another war. Maneuver officials indicated that although improved radar is on order, even with this provision for longer range detection of enemy aircraft, it still may be necessary to employ picket planes far forward of friendly troops in order to give ground and air troops adequate warning.

In the functioning of logistical support units, it was found that command machinery was inadequate, particularly in the early stages of the airlift, to coordinate the loading and unloading at the aerial ports of embarkation and debarkation. Supplies dispatched from Greenville and Maxton at times did not correspond to those most needed at the airhead. Some confusion cropped up in the initial phases due to a lack of sufficient port company personnel at the unloading point. Although



Department of Defense Photograph

Into the mouth of this C-124 transport, exhibited at Swarmer, go tanks, heavy artillery and vehicles for delivery into battle zones.



Department of Defense Photograph

Men of the 11th Airborne Division complete final lashings on an antiaircraft gun that will be parachuted to troops behind "enemy" lines.

current doctrine holds that the combat troops must assist in the unloading of planes during early stages of the airborne campaign, it is essential that these troops be relieved at the earliest possible moment to carry out their primary function of engaging and destroying the enemy on the ground.

Maneuver directors believe that a possible answer to this problem may be the employment of the beachmaster concept developed to a high degree in World War II. Such beachmasters would be responsible for the orderly unloading and distribution of supplies at the incoming port. Also indicated was the need for a logistical support organization to be trained specifically to load and unload planes so as to free as many combat troops as possible of those details.

A marked degree of joint effort between tactical air and ground elements was evident throughout. Pending the arrival of heavy artillery, tanks and antitank weapons in the beginning phase of the campaign, the ground troops relied heavily on tactical air support to deliver strikes against selected enemy targets. Although weather hampered this cooperation to some degree, maneuver officials were high in their praise of the

rapidity with which fighters and fighter-bombers responded to requests for ground support. Significant was the fact that the faster jet planes, undergoing their first real test in support of advancing infantry, apparently are capable of rapid target identification and attack despite tremendous speed.

The ground controlled approach (GCA) method of directing airplanes into the landing fields—so effective in Operation Vittles—was employed with a high degree of success. Despite frequent and heavy thunderstorms, the airlift continued without interruption or major landing incidents.

For the first time under tactical conditions, airplanes of the troop carrier units and the strategic airlift craft of the Military Air Transport Service were employed in combination to achieve a common goal—the movement of personnel and supplies in support of a joint tactical operation. Air Force commanders expressed satisfaction with the outcome of joining these two major air organizations.

Missing from Swarmer was the familiar towed glider relied

Department of Defense Photograph

An air-dropped 105mm howitzer is freed from its harness. In the background, troopers of the 187th Airborne Infantry Regiment float to earth.

on so heavily in the Normandy campaign and the landings across the Rhine at Wesel in World War II. Groomed to assume the glider's role is the assault transport—resembling a strongly built glider but equipped with engines and landing gear—which underwent a test in the Carolina maneuver. These assault transports are capable of landing on rough terrain fully loaded with troops and equipment, thus providing a quick follow-up to air-dropped troops—a gap never quite satisfactorily filled by the towed glider.

Jeeps, 40mm antiaircraft guns, 75mm and 105mm howitzers, and other heavy materiel were dropped from C-119 transports with the use of large parachutes—some 96 feet in diameter—arranged in clusters of two or three. However, combat troops indicated that the science of delivering heavy equipment by parachute has not been perfected to the degree that would be required under actual battle conditions. Communication equipment such as large radios and switchboards, for example, were particularly susceptible to damage, according to some of the ground unit commanders.

Shortage of ample-size parachutes, equipment packing problems, modification of weapons and vehicles to minimize damage on contact with the ground, the need for more adequate aircraft, the brief period in which the plane is over the drop zone—these are among the factors which make the air-drop of equipment and supplies at best an expedient dictated by the urgency of troop needs.

The new concept demonstrated by Swarmer—that a completely airborne operation with resupply by air and reasonably limited objectives is practicable—does not imply that the amphibious operations used extensively in World War II are a thing of the past, maneuver officials point out. Rather, they agree, this new technique is particularly adaptable to operations wherein beach landings are coordinated with the air landings. In conjunction, the two types of actions would complement each other by speeding up and firmly establishing a linked-up beach-airhead at possibly a more modest expenditure in casualties.

The many possibilities for the employment of the tactical airlift concept are currently being evaluated by Armed Forces planning authorities. In this endeavor, the practical findings demonstrated in the Carolina pinelands this Spring represent a monumental advance in the development of a tested air-ground doctrine for the future.

WHALE HUNTING WITH THE JAPANESE

By

LIEUTENANT COLONEL CHESTER A. LEE

I HAVE just returned from the most successful whaling expedition in Japan's history. Our catch consisted of 1941 whales that provided Japan with 157,000 barrels of whale oil and more than 100,000,000 pounds of raw materials for food and industrial use. From these raw materials 80,000,000 pounds of meat products have been produced.

As official observer for SCAP (Supreme Commander for the Allied Powers), I spent five months at sea, the only American with a Japanese whaling fleet. Joining the first fleet of the fourth postwar Antarctic Whaling Expedition, I boarded the 12,000-ton factory ship *Nisshin Maru I* in Japan on 1 November 1949. Our fleet consisted of 17 ships, including eight catcher boats, two 10,000 and one 3500 gross-ton reefer (refrigerator) ships, a 10,000 gross-ton tanker and four 1000 gross-ton frozen meat carriers. A second fleet, consisting of 14 vessels headed by the factory ship *Hashidate Maru*, followed us 19 days later. It carried a French naval commander as an official SCAP observer.

After arriving in Antarctic waters 25 days later, our experienced Japanese crews began the hunt for sperm whales. Generally sperm whales are from 35 to 45 feet long, but in the Antarctic they sometimes get to be big fellows. Two that we captured, for example, measured 52 feet each and the head of one was 15 feet 5 inches from ear to ear. For a sperm whale, he was an all-out monster.

As a result of the battles between male whales for leadership of a herd, the sperm often is a maverick. Males which lose

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LIEUTENANT COLONEL CHESTER A. LEE, CE, was an official observer for the Natural Resources Section, SCAP, on Japan's fourth postwar Antarctic Whaling Expedition.

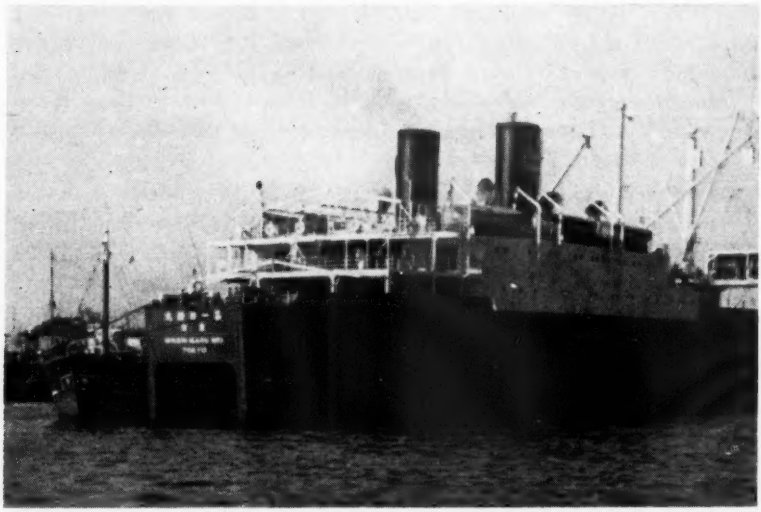
the fights are driven out of the herd and usually take off on their own for Antarctica to sulk in leisure. As a result, the sperm whales found in the Antarctic are usually males.

The sperm whale is a hard fighter. In slightly less than a month our fleet caught 172 of them before the season opened for catching the huge blue and fin whales.

The blue is the largest of whales, often reaching lengths of more than 95 feet. Some have jaw bones as long as 25 feet. This jaw bone is the source of whalebone or baleen, which in former days women used for corset stays. Some 400 of these bone structures are arranged like pleated accordions on each side of the whale's mouth. The bones have long brushes on their outer edges that look like bristles but actually are fine fretworks of bone with loose ends.

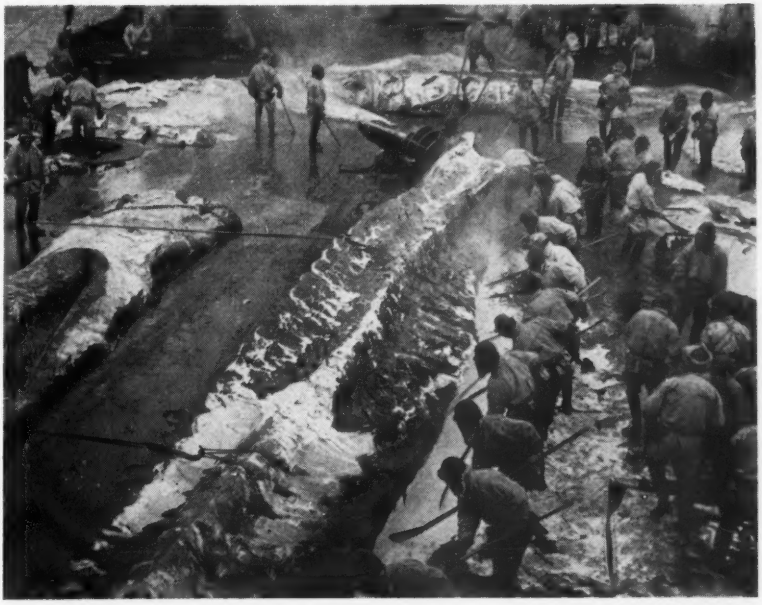
Although it is the biggest mammal in existence, the blue whale, strangely enough, subsists on one of the smallest sea creatures, a sort of shrimp, because the opening in its throat is extremely small. The whale sucks in the shrimp like a vacuum cleaner as he moves through the water. Then he shuts his mouth, forces out the water, and a meal of between one and two tons of shrimp is snared in the brushwork of his mouth.

This huge meal is not as large as it seems when one con-



Department of Defense Photograph

The *Nisshin Maru I*, factory vessel of Japan's whaling fleet, was the floating headquarters of the Antarctic expedition.



Department of Defense Photograph

Flensers at work on the deck of the factory ship. The blubber and bones are cut into small pieces for rendering.

siders that the baleen whale may weigh up to 70 tons, average 80 feet in length and have a heart that alone weighs 750 pounds. The whale's heart is important to the Japanese whaler. In the belief that it makes him stout-hearted, a Japanese whaler makes certain to eat a piece of the heart of each whale killed. The most tasty whale meat, however, comes from the humpback whale.

The 1949-50 expedition resulted in a record "take." Although the time spent in whaling waters totaled only 11 weeks in contrast to the 14 weeks on the preceding expedition, our ships returned loaded to capacity with 235 more blue whale units,* 3,000,000 more pounds of raw materials for food and industrial use, and 37,000 more barrels of whale oil. This high increase in oil and the relatively low increase in meat and its by-products were the result of changes in operating methods. Since demand for whale meat had fallen off in Japan, large quantities of meat, which had been salted during

* One blue whale unit equals one blue whale, or two fin whales, or two-and-a-half humpback whales.

the first three expeditions, this time were processed for oil instead. As a result, each blue whale yielded an average of 114 barrels of oil plus 32 metric tons of oil-bearing raw materials that, in turn, provided an additional 13 barrels.

The transfer of the whale oil into our tanker was an involved process. First the tanker carrying our fuel oil on the voyage southward piped the fuel aboard other vessels in the fleet as

Department of Defense Photograph

An inflated whale acts as a buffer between a whaling ship and the fleet tanker during refueling operations in the Antarctic.

required. Then as the tanker's compartments were emptied, they were scrubbed and whale oil was piped into them from our factory ship. This transfer was made three times in all, and each time our captain had to find a still harbor in the ice large enough for the two ships.

Among the ever-present dangers in the Antarctic were the frequent storms that would come up suddenly, pushing our ships into the ice-pack. We did not worry too much, however, about any of our ships being blown together during a storm. Instead, we relied on an old whaling practice involving the whales themselves. A couple of dead, inflated whales would be rigged alongside the ship and used as fenders. The mammals riding the surface served as buffers between ships and enabled us to proceed with our exchange of oil unhampered. A far greater danger was the free-floating ice which required unceasing vigilance on the part of expert seamen to keep the fleet secure.

The heightened efficiency of Japan's whaling fleets since the war is reflected in the increased catches and the increased amounts of oil and foodstuffs obtained from each whale from year to year. In all, the four whaling expeditions authorized by SCAP's Natural Resources Section have already brought Japan more than $55,000,000 worth of whale products.

The 80,000,000 pounds of whale meats of all types provided by our expedition alone should add considerably to the Japanese diet—especially since protein foods and edible oils are Japan's most critical food requirements. Additionally, the whale oil brought to port resulted in direct savings to American taxpayers inasmuch as the United States has undertaken to provide Japan with a minimum amount of high grade and edible oils each year. The whale oil is used in Japan in the manufacture of soap, glycerine, margarine, cooking oil and alcohols.

In the course of our expedition we could not help but note that a whale, in certain aspects of its behavior, is a good deal like a human being. When it is scared, it starts to run. Our crews were able to catch the fleeing whale when he came up for air. But when a catcher-boat crew encounters an old bull, one who has been chased before and is prepared, he can drive them crazy. When they encounter such a bull, experienced whalers just wave goodbye and take off after three others instead.

"TO MARKET, TO MARKET . . ."

By

COLONEL CHARLES F. KEARNEY

FILLING the Armed Forces shopping bag with fresh foods is a $30,000,000-a-month business. Nation-wide in scope and set to the tempo of high-speed communication and transportation systems, the Army's Quartermaster Market Center System is a World War II contribution to the Nation's unified defense establishment. Operating with all the foresight and acumen of a thrifty, budget-wise housewife, the Market Center System purchases, ships, stores and supplies virtually all the perishable foodstuffs consumed by the Army, Air Force, Navy and Marine Corps. In addition, it furnishes perishables to civilian components in training and procures similar supplies for certain oversea aid programs.

Approximately 100 varieties of perishable food items totaling more than 130,000,000 pounds a month are regularly supplied to the Armed Forces by the Market Center System. Perishable foods—those requiring refrigeration in shipment and storage—include fresh and frozen meats, vegetables, fruits, fish and other seafoods, dairy products and poultry.

Purchases are made from all over the United States and, under certain circumstances, from foreign countries. By keeping posted on the availability and price of every conceivable fresh food item needed by the Armed Forces, the Market Center System, through its staff of food procurement specialists, is able to achieve maximum economies by buying commodities at seasonal production peaks. At the same time, it aids in maintaining a balanced national food economy by shifting procurement from items in short supply to others that are more abundant.

Annual savings resulting from unified purchases for all the

COLONEL CHARLES F. KEARNEY, QMC, is Officer in Charge, Headquarters, Quartermaster Market Center System.

military services run high into the millions of dollars. At the same time, suppliers benefit by knowing the quantities and qualities of commodities desired, by fewer rejections, and by equal opportunity afforded all interested suppliers to sell their products to the Armed Forces.

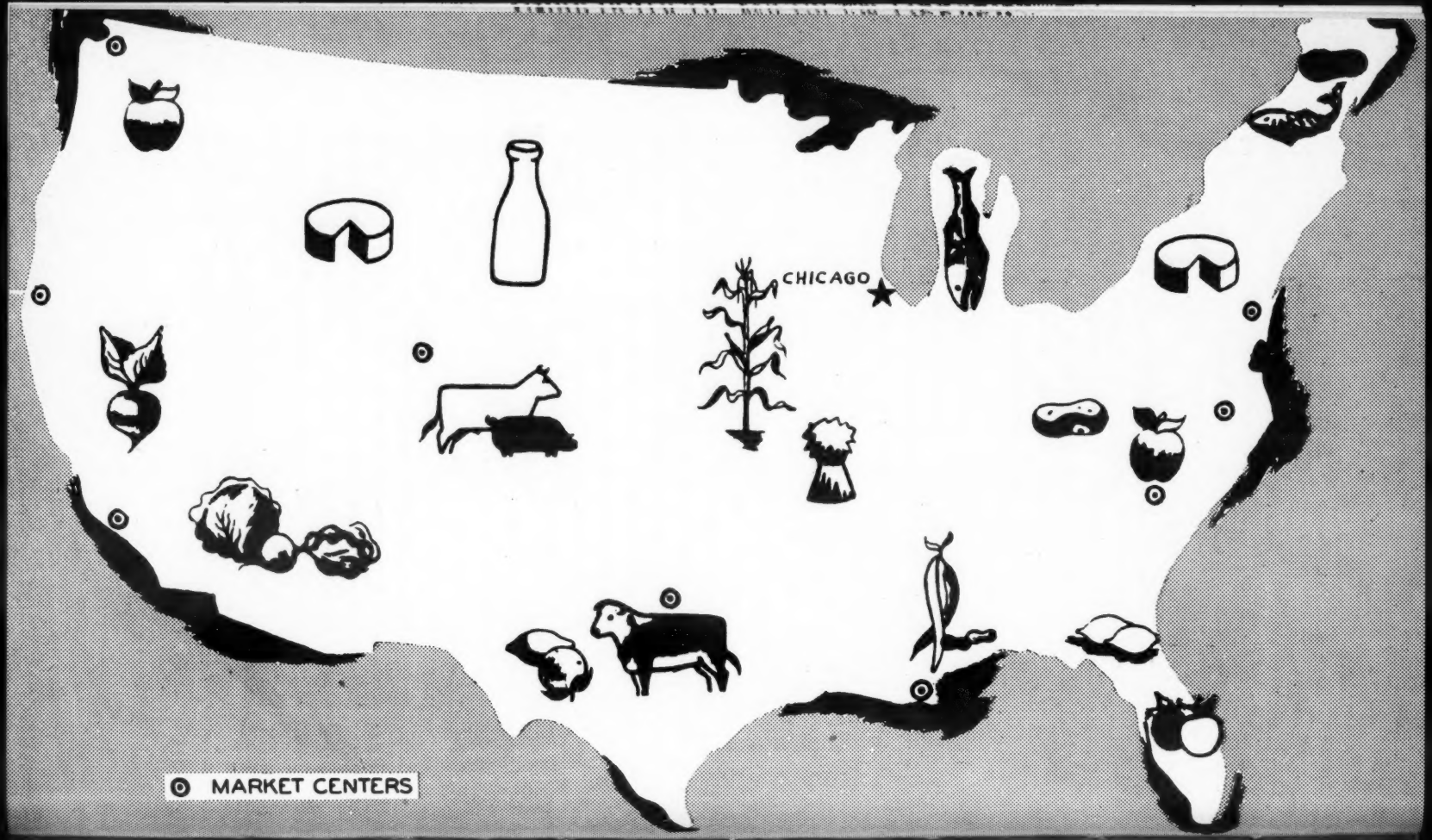
The results of this flexible, far ranging purchasing program are reflected in the finished product as it appears on the serviceman's dining table. Through the widespread operations of the Market Center System an abundant variety of the finest fresh foods is delivered to military kitchens speedily and in first-class condition. Spoilage has been reduced to a minute fraction of one per cent.

The productivity and resourcefulness of the American farmer, and the American genius for organization and planning have combined to make the Quartermaster procurement program possible. Modern communication, advanced refrigeration methods and high-speed transportation provide the tools for the efficient and economical operation of the System. Reduced today from its wartime capacity, the Market Center System remains a vital link in the Nation's security, ready for immediate expansion in emergency.

Born of necessity in 1941, the Market Center System was established to bring order to the obsolete methods of local procurement, which under wartime pressures proved incapable of meeting the needs of the rapidly expanding military establishment. With the Nation's agriculture and food suppliers operating at full capacity, an efficient method of procurement was needed. A field headquarters was established in Chicago—the heart of the Nation's food production belt. At this nerve center, food requirements for every military installation in the United States and overseas were computed from day to day and month to month—a key factor in the System today.

Normally five pounds of food are required daily for each serviceman. To plan for the preparation of this amount of food in a manner acceptable to all, a master menu suggesting the composition of every meal for each day of the year is made up in advance by the Office of the Quartermaster General in collaboration with the Surgeon General's Office. The master menu is distributed to all military installations six months in advance. From this, the field headquarters determines how much food will be needed for each kitchen.

Requisitions for the quantities of foodstuffs required are transmitted to the nine Market Centers at Seattle, San Fran-


CHICAGO
MARKET CENTERS

cisco, Los Angeles, Denver, Fort Worth, New Orleans, Richmond, Columbia (South Carolina) and New York—strategically located in the Nation's important food-producing areas.

The Market Centers are in continuous communication with ths Chicago headquarters by teletype and telephone. Maintaining contact with market conditions in their areas, buyers advise the Chicago headquarters of availabilities, condition of the products, prices and all factors affecting present or future crops. A choice must be made from among varying qualities of foodstuffs offered. Shipping distances to military installations must also be considered. After analyzing and comparing the data received from the various Market Centers, the headquarters directs the action to be taken. Before contracts are negotiated every vendor, in effect, is brought into immediate and direct competition with other sellers.

Direct contact with companies and individual suppliers is maintained by a crew of 12 field buyers operating throughout the country from field offices located in Boston, Alexandria (Virginia), Jacksonville, Miami, Kansas City, San Diego, Mobile, San Antonio and El Paso. Those buyers are food experts who know quality and value. Many have years of experience in wholesale buying.

The field buyer plans his itinerary so that he will be on the spot when the crop is in lush season. In early October he will be at Presque Isle, Maine, during the potato harvesting season. Opening a temporary office, he will purchase millions of dollars worth of potatoes to supply service requirements.

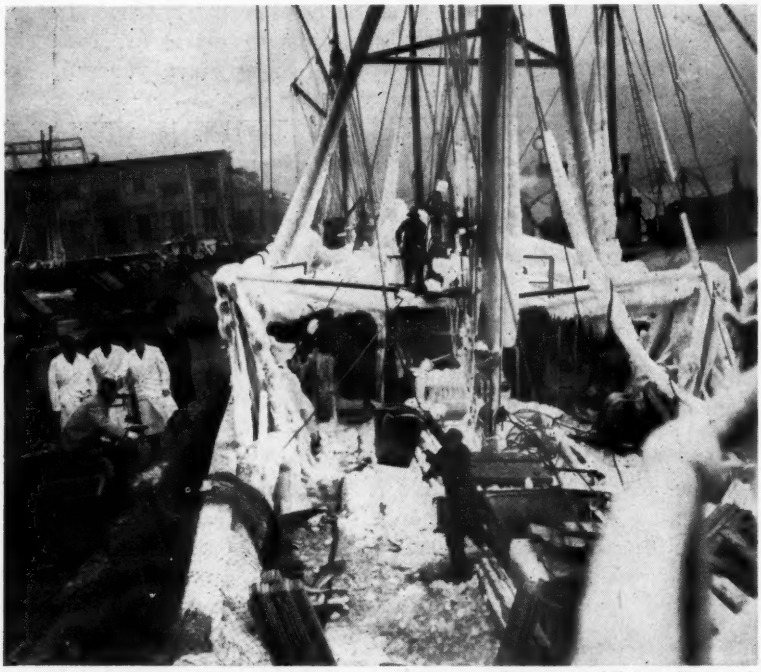
About the same time another buyer is setting up operation in the Florida citrus and vegetable belt, and 2000 miles to the west still others are opening field offices in range of the vegetable producing area and citrus groves of the lower Rio Grande Valley. While buying in Maine, Florida and Texas, the specialists are studying reports of snowfalls in Colorado which presage full irrigation ditches and good crop prospects for the next growing season. With the advent of Spring these same men will descend upon Colorado's San Luis Valley to buy products from a great food center reclaimed from lands once barren.

As the season advances, buyers move through the Texas produce belt, and the Florida agents are joined by assistants who work north with the heightening sun to bargain for green beans, peppers, eggplant, beets and potatoes from the South to New England.

The Presque Isle buyer specializes in potatoes. His cycle takes him to the potato fields of Long Island, New Jersey, Virginia, the Carolinas and as far south as Alabama. Buyers on the West Coast and in the rich production areas of the Middle West follow routes that lead them into the great farm, orchard and dairy regions. At Boston a specialist in fish and other sea foods is working fast to buy more than a million pounds a month. A roving buyer in New York covers the markets for whatever may be needed within this area. Still others keep supplies flowing into the Military District of Washington through the Richmond Market Center.

Quartermaster buyers must be constantly alert to hold down costs as well as to insure that food purchases are of the highest quality. Only the man on the ground can determine whether a car lot of lettuce graded U. S. No. 1 when offered for sale will rate as U. S. No. 1 when it is placed on the table.

Much of the buying is influenced by the seasons. For example, the Market Center System buys about 15,000,000 pounds



Department of Defense Photograph

Veterinary Corps officers and a civilian marketing specialist prepare to inspect an incoming shipment of seafood at Boston Fish Pier.

of cheese a year—much of it in May and June when production is at a peak. Fourteen varieties of cheeses are bought, with the bulk being cheddar manufactured in the great cheese-producing states of Wisconsin, New York and Oregon.

Chicago and Kansas City are the main sources of meat, although independent packers all over the country participate in Armed Forces business.

Every serviceman is served turkey on Thanksgiving and Christmas. So that ice-bound troops in Alaska may have their supply on time, shipments must be made in August while ocean passages to Far North stations are still open. Christmas turkeys for the European and Far East Commands begin to move in September and October.

Turkeys are bought in the heavy producing areas of the Midwest, the Rocky Mountain States, the Pacific Coast and Texas. To avoid periods of highest prices, the procurement of other poultry is concentrated in the flush months of September through December. An average of 161,000 cases of eggs is purchased monthly for Armed Forces consumption. Since March and April eggs have a better storage quality, heaviest purchases of eggs are made in these months, market conditions permitting, and stored to await oversea shipment. In warmer weather buyers exercise greater selectivity to assure quality.

Quality controls are constantly maintained by inspectors of the Veterinary Corps who work alongside Quartermaster buyers. All meats must bear the approval of the Bureau of Animal Husbandry; in addition the Veterinary Corps inspectors decide whether the products meet prescribed Armed Forces standards. According to Department of Agriculture estimates, the beef purchased by the Quartermaster Corps for the Armed Forces in 1949 represented approximately two per cent of the beef marketed in the United States during that period.

At the peak of its operations in fiscal year 1945, the Market Center System purchased $1,514,000,000 in perishable foodstuffs. Last year it purchased fresh food totaling 1,608,000,000 pounds at a total cost of nearly $352,000,000.*

Many times in World War II and thereafter, the Market Center organization has been called upon to resolve some tight

* Meats accounted for 588,041,000 pounds costing $209,627,000; dairy and poultry products, 275,227,000 pounds costing $90,828,000; fish and other water foods, 17,473,000 pounds costing $5,862,000; fresh fruits, 147,122,000 pounds costing $11,458,000; fresh vegetables, 547,000,000 pounds costing $25,351,000; frozen fruits, 10,555,000 pounds costing $3,498,000; and frozen vegetables, 22,634,000 pounds costing $4,902,000.

predicaments in food distribution. In 1942, for example, it was discovered that a vast maneuver area in the South, overflowing with thousands of newly arrived troops, had inadequate cold storage facilities for handling fresh foods. To cope with the problem, thirty refrigerator cars on a supply base railway spur were pressed into service. Trainloads of ice had to be shipped in from as far away as St. Louis to maintain these temporary storage facilities.

During the nation-wide meat shortage in 1946, packing plants in the East and Middle West were without meat and livestock shipments were at a standstill. Yet 5,000,000 pounds were due to be loaded at New York to meet oversea requirements. As a substitute, 165 carloads of poultry (approximately 5,000,000 pounds) were diverted from stations east of the Mississippi and sent to New York. Supplies were unloaded in time to meet the sailing schedule. Although servicemen overseas ate chicken three times a week, they were not without an acceptable beef and pork substitute.

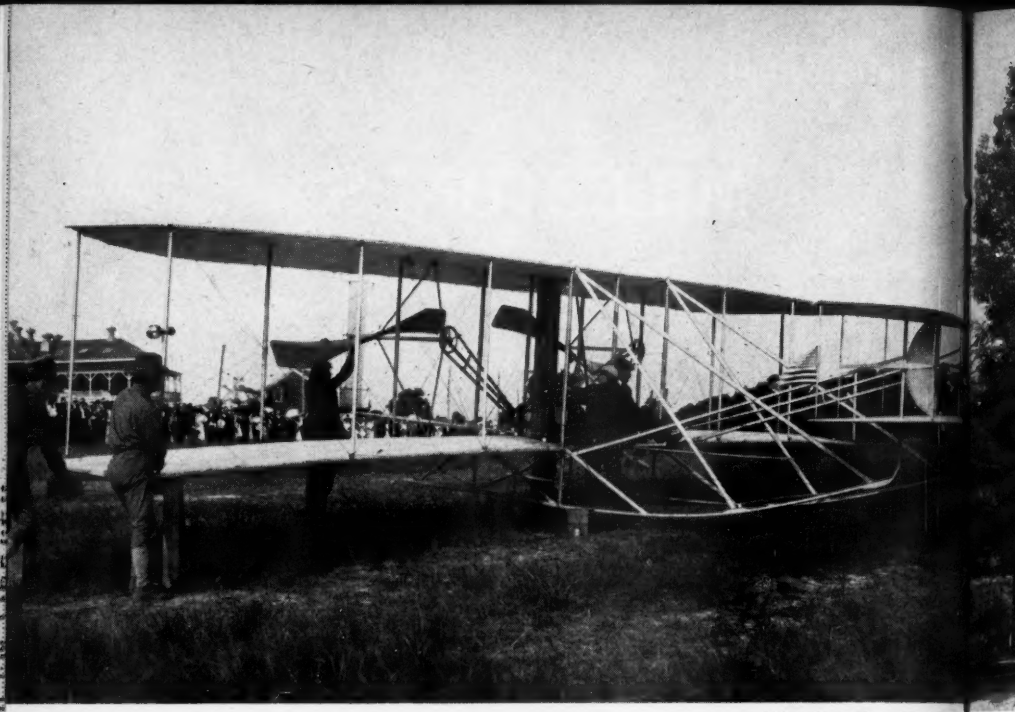
Perishable foods represent about 70 per cent of the food budget for military tables. With few exceptions, fresh milk and ice cream are purchased locally by posts, camps and stations. Other items are added to local purchase lists as economy and convenience dictate. Fresh food supplies are procured locally overseas only when the needs of the indigenous population are not adversely affected.

The Market Center System offers numerous economies and advantages. By purchasing in large quantities, important discounts are obtained. Shipping in carload lots reduces transportation costs. Inspection at points of origin practically eliminates rejections at the using installation. In addition, important benefits are realized in the civilian economy. The program is geared to prevent disruption of food supplies in periods of low production. In times of crop surpluses, maximum utilization of available food supplies is stressed. Conservation of food is assured by the System's wide coverage of food sources, its speedy purchases and deliveries, and its cooperation with producers. Losses from spoilage have averaged less than three-thousandths of one per cent.

In its race against rot and spoilage, the Quartermaster Marketing Center is an important auxiliary in the Armed Forces' continuing campaign against waste. Besides obtaining maximum value for every dollar expended, it assures speedy delivery of top quality foodstuffs at the peak of their freshness.

MILESTONES

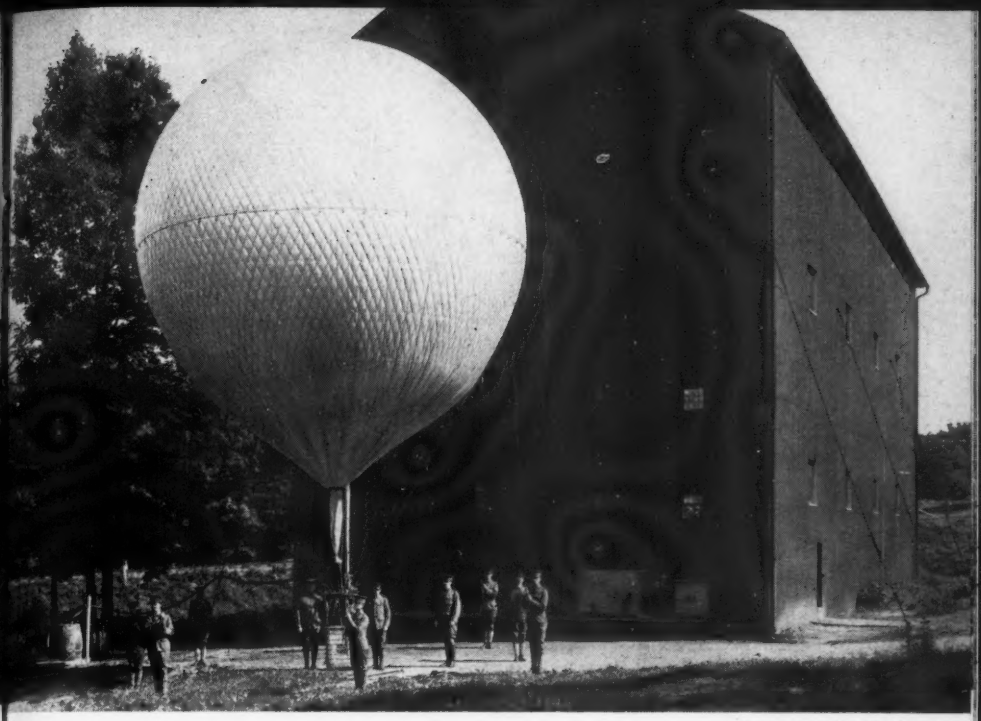
The atomic bomb, pictured here in the Bikini blast, marks an epoch for weapons, a milestone without parallel. Other strides in the advancement of the tools of battle are pictured on following pages.



National Archives Photograph

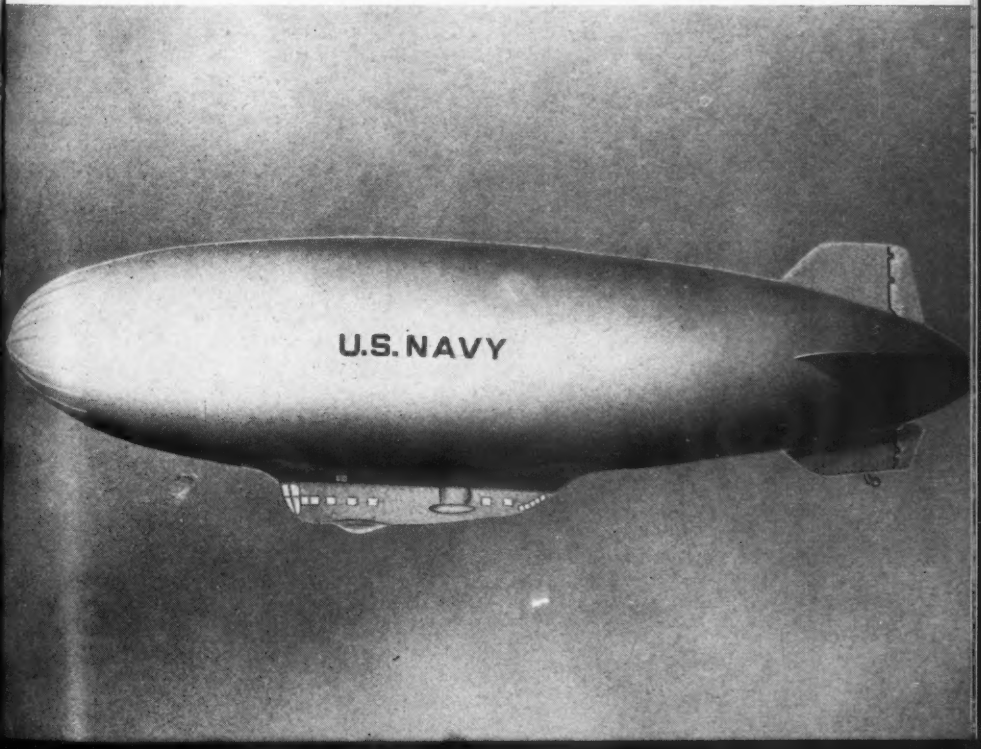
The Army bought its first airplane in 1908 and flew it until 1911. Although its air speed was something less than supersonic, this Wright Brothers model, patterned on their "Kitty Hawk," paved the way for aeronautical advances that made possible the B-36 (below).

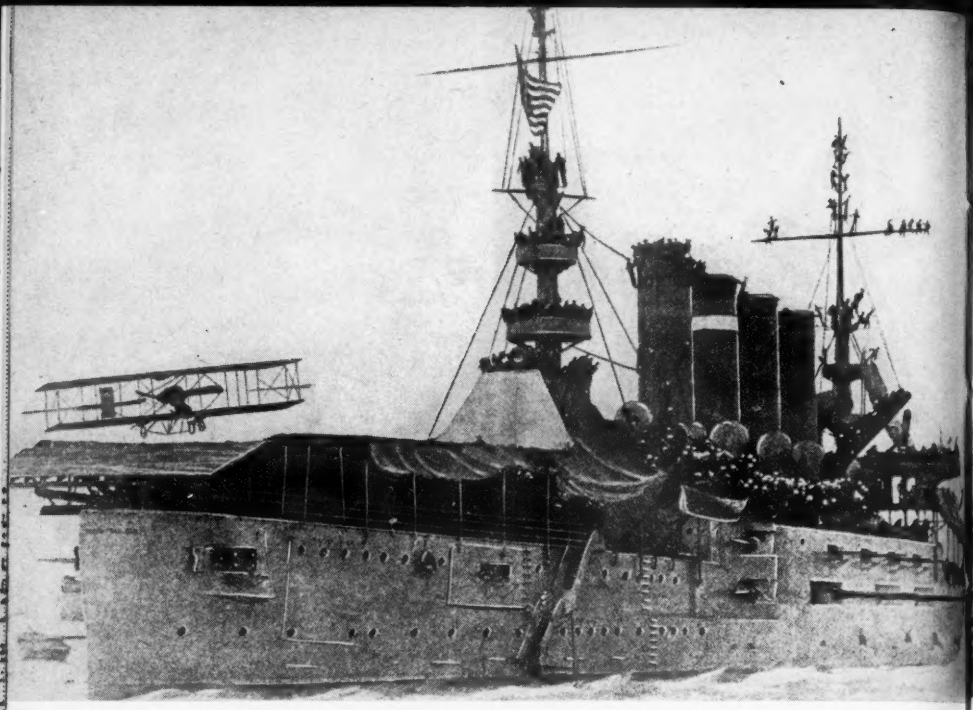
Unless otherwise indicated photographs in this section are by Department of Defense agencies.



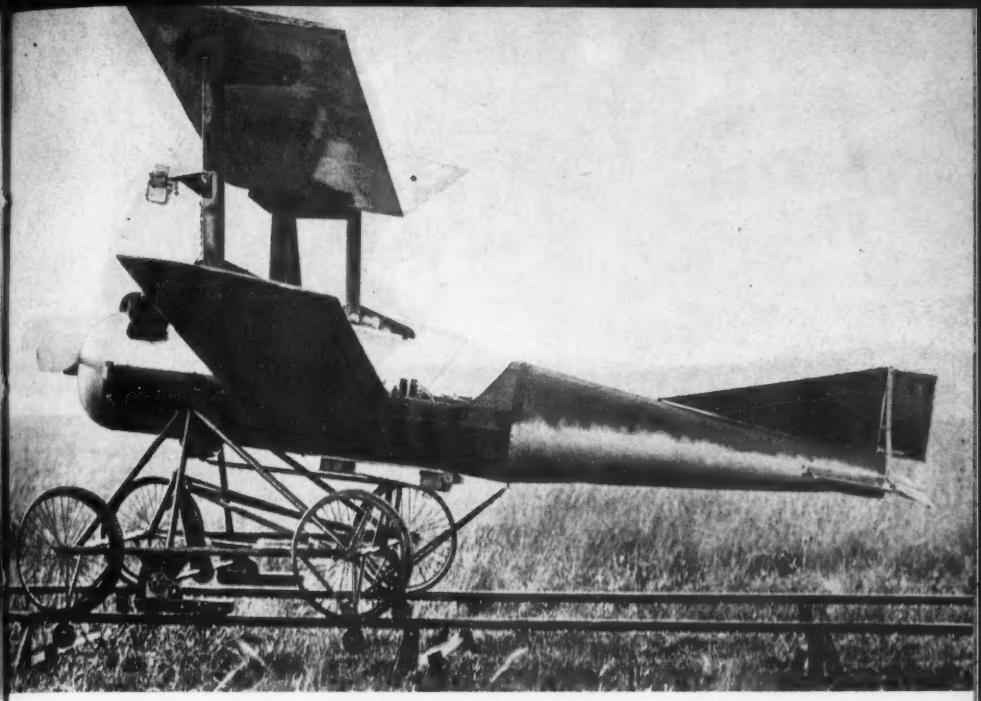
National Archives Photograph

At Fort Myer, Virginia, in 1908 the latest lighter-than-air ship is pictured outside a balloon hangar used by the Army. Today's version of the balloon (below) is the 324-foot Navy blimp designed to carry the latest equipment for observation and submarine pursuit.

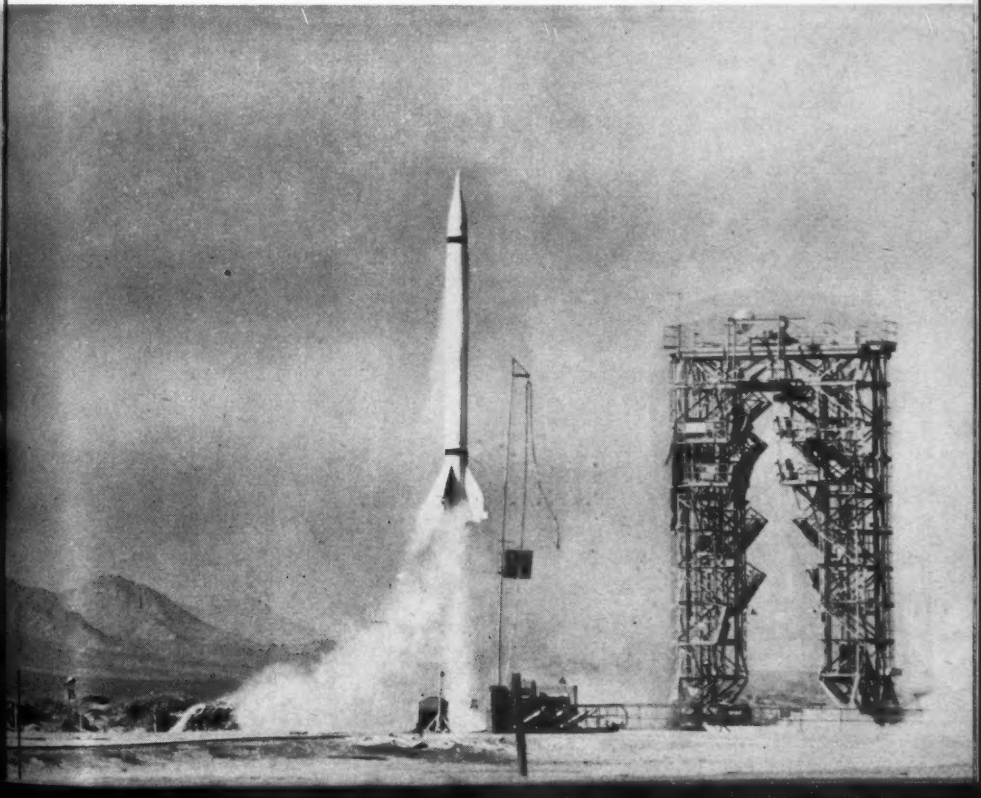




A plane lands on the 32 x 127 foot platform of the *USS Pennsylvania* in 1911 during the pioneer era in the development of the aircraft carrier. A view of a modern carrier (below), the *USS Leyte* passing under Brooklyn Bridge, displays a considerably larger flight deck area.



A World War I pioneer in the field of guided missiles was this vacuum-controlled craft shown on its launching rails (above). It was designed to carry explosives behind the German lines. The Navy's 1950 Viking rocket (below) carries instruments for upper atmospheric research.

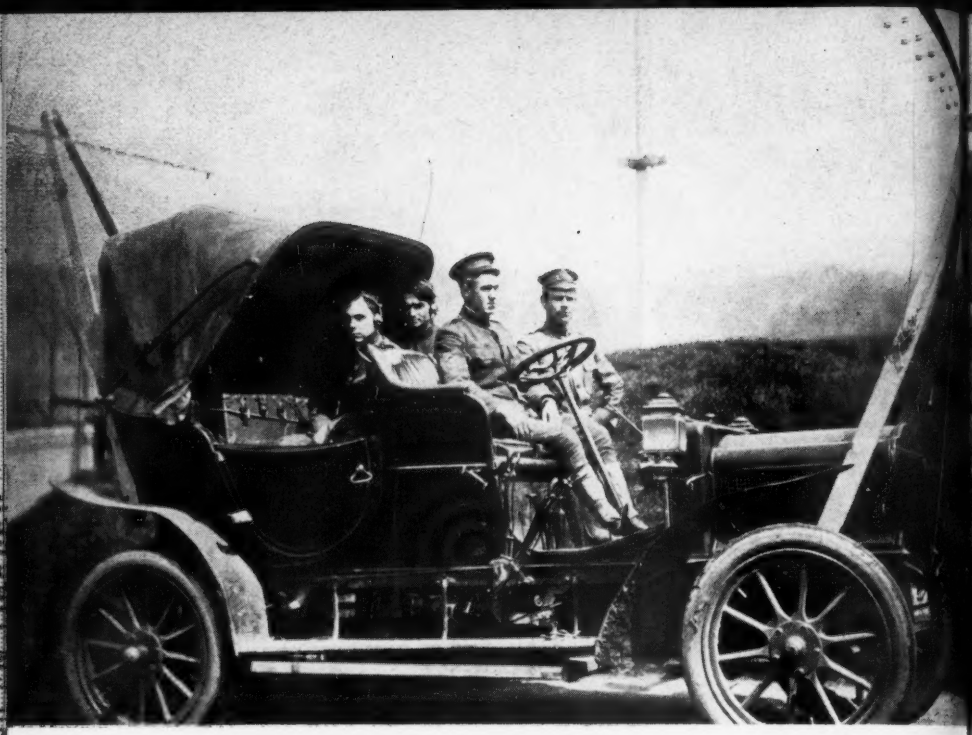


The radar mechanism atop the tent (left) is an electronic version of the crude World War I airplane detectors pictured below. These early "sound catchers" worked on the simple principle that any ear, if it were big enough, could hear the motors of an enemy plane soon enough to alert the defense forces.

National Archives Photograph

This World War I vintage tank climbed Pike's Peak as a stunt in connection with a Victory Loan drive, setting an 11,200-foot altitude record for heavy war machines. Its streamlined and heavily armored counterpart, the M-46 Patton tank (below), represents three decades of advance in design and armament.

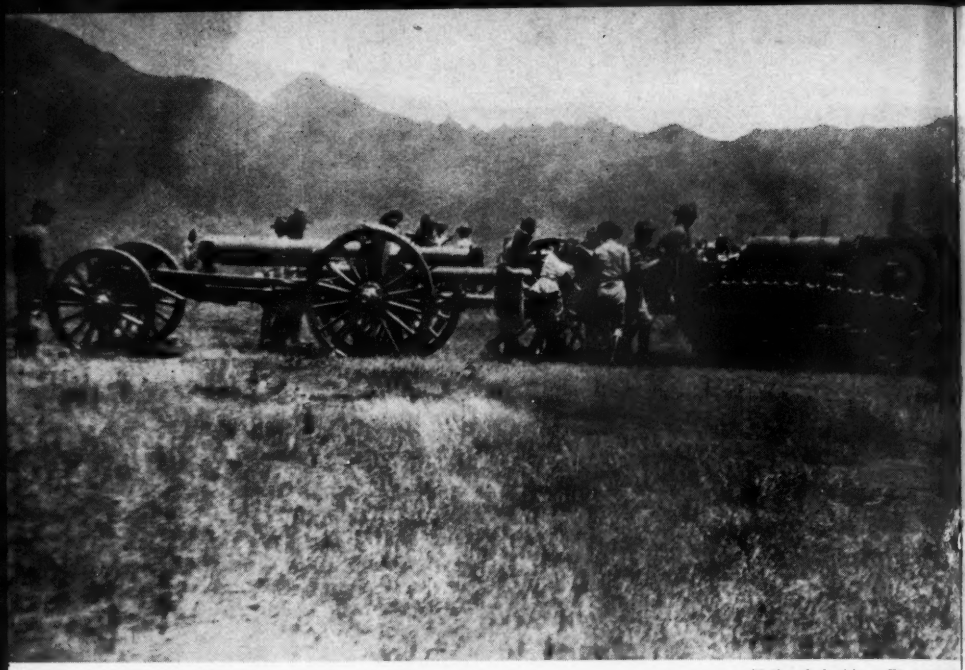
National Archives Photograph



One of the Signal Corps' earliest experiments in mobile communications systems was a crude antenna mounted on a 1910 automobile. Below, Marines use a compact and efficient radio-equipped jeep during practice training for Operation Portrex held this Spring.

National Archives Photograph

The Gatling gun, invented in 1862, was in use almost until the time of World War I. From it was evolved the present-day machine gun such as the one pictured below in action in the Philippines during World War II. Note that it took six men to serve the Gatling gun.



National Archives Photograph

This tractor was used by the 9th Field Artillery, one of the first completely motorized regiments in the Army. The 1918 vehicle is dwarfed by the tank destroyer chassis (below) which tows an 8-inch rifle to the front during World War II.

TEAMWORK UNDER THE JOINT CHIEFS OF STAFF

By

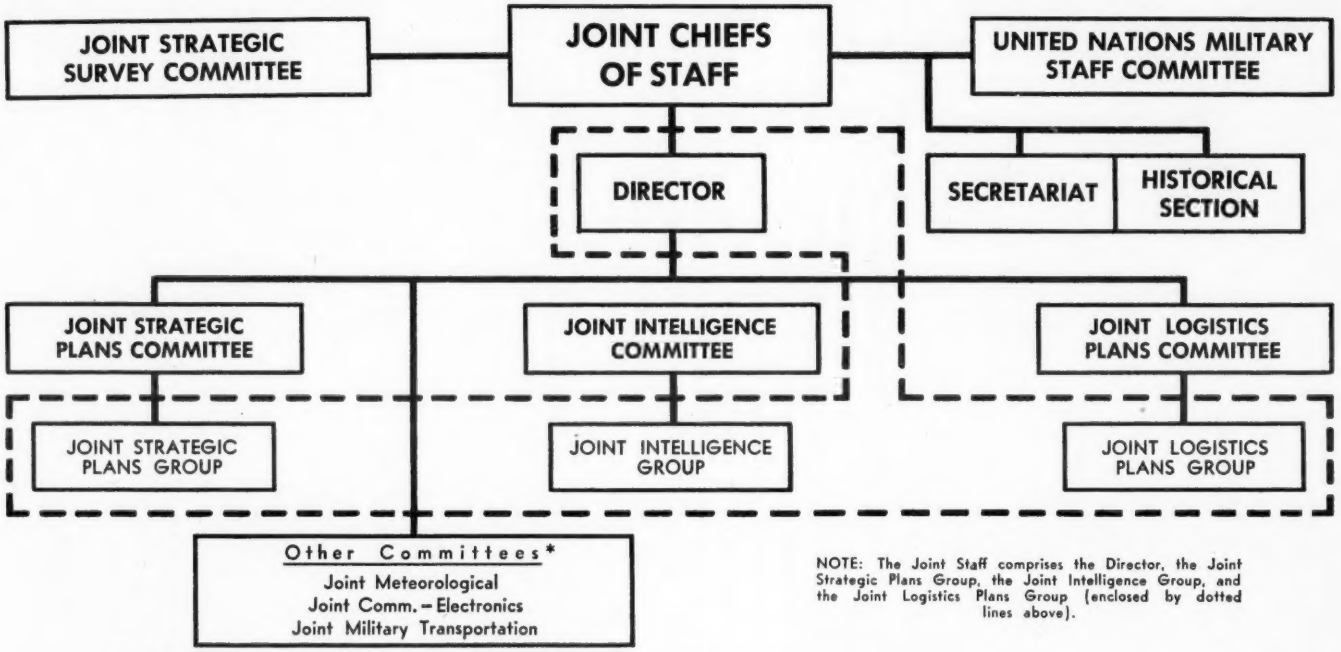
CAPTAIN STEVE W. MULKEY

WITH most of the free nations of the world depending upon the strength of the United States for the defense of Western civilization, the readiness of our Armed Forces becomes a matter of the utmost significance to the world today. Much of the tremendous responsibility for insuring that our Armed Forces are adequate to back up the United States' heavy international commitments falls upon the Joint Chiefs of Staff. The Joint Chiefs—who serve as the principal military advisers to the President, the Secretary of Defense and the National Security Council—are charged with providing strategic plans and direction for the Armed Forces. They are aided in their work by a secretariat and several committees and agencies including a Joint Staff, a select group of officers which does a substantial part of their planning. In the interrelationship of the Joint Chiefs and the Joint Staff, the teamwork inherent in unification is brought into sharp focus.

Calmly and methodically, with a sense of historic urgency animating their deliberations, the Joint Chiefs of Staff deal with a wide range of problems vital to the national security. In the international sphere, such problems as the form of military organization to be adopted under the North Atlantic Pact, and the kinds and amounts of military equipment to be made available to participating nations under the Mutual Defense Assistance Program were recently up for decision. As a continuing project, the Joint Chiefs are ever mindful of the problem of providing, within budgetary ceilings and without undue strain on the national economy, the necessary balanced forces capable of implementing strategic plans. They maintain emergency action plans in constant readiness, and revise

CAPTAIN STEVE W. MULKEY, Inf., is assigned to the Office of the Chairman, Joint Chiefs of Staff.

Organization of the Joint Chiefs of Staff



NOTE: The Joint Staff comprises the Director, the Joint Strategic Plans Group, the Joint Intelligence Group, and the Joint Logistics Plans Group (enclosed by dotted lines above).

* The functions of these JCS committees are indicated by their titles. These committees are not a part of the Joint Staff; their members are part-time representatives from the three services.

long-range and logistical plans to meet changing conditions on the international scene.

Among other current problems, the Joint Chiefs are studying the assignment of responsibility for guided missiles and the joint mobilization plans for the three services. Within the past year the Joint Chiefs have assigned specific logistical responsibilities among the services. They have arranged for the consolidation or joint use of certain airfields and transportation facilities, for joint military education and training in certain subjects, and for the standardization of equipment and processes. Empowered to create unified commands wherever necessary, they are currently studying the extent to which logistical responsibilities can be placed upon commanders of unified commands without interfering with their tactical missions. In effect, the decisions of the Joint Chiefs of Staff have repercussions throughout our national defense structure.

The current Joint Chiefs of Staff organization evolved from the experiences of World War II. It received its initial impetus in the United States-British decision of January 1942 to establish a Combined Chiefs of Staff. Modeled somewhat after its British counterpart—the British Chiefs of Staff Committee—the United States Joint Chiefs of Staff were established to insure coordinated strategic direction for the United States military forces prosecuting the war and to provide United States representation on the Combined Chiefs of Staffs.* During its wartime operations, the Joint Chiefs' functions and duties were not formally defined, thus allowing considerable flexibility in organization and activities. The Joint Chiefs functioned not only as a coordinating agency between the Army and the Navy; they also made strategic plans and issued directives to implement them. In addition, the Joint Chiefs were responsible for the strategic conduct of the war in areas where the United States had been assigned primary responsibilities, as in the Pacific.

Initially, the creation of the Joint Chiefs of Staff had been authorized by the Army-Navy Board, its predecessor in joint planning, and approved by the President. By the time the Army-Navy Board was discontinued in 1947, the Joint Chiefs of Staff had absorbed nearly all of its functions.

It was not until the passage of the National Security Act of 1947, however, that the statutory responsibilities of the Joint Chiefs of Staff were defined. This Act also authorized

* The Combined Chiefs of Staff have since been dissolved.

the establishment of the planning and coordinating agency of the Joint Chiefs—the Joint Staff. The National Security Act Amendments of 1949 created the new position of a permanent Chairman without substantially changing the mission of the Joint Chiefs of Staff, and enlarged the Joint Staff.

As presently constituted, the Joint Chiefs of Staff include the Chairman, the Chief of Staff of the Army, the Chief of Naval Operations and the Chief of Staff of the Air Force.*

As provided by law, the Joint Chiefs are authorized to establish unified commands in strategic areas. They also are charged with reviewing major materiel and personnel requirements of the military forces, so that those requirements will support strategic and logistic plans. They formulate policies for joint training and for coordinating military education. Finally, they provide representatives on the Military Staff Committee of the United Nations. The senior military members of the United States Section of that Committee are representatives of the Joint Chiefs of Staff.

In fulfilling their responsibilities, the Joint Chiefs of Staff coordinate their activities with other agencies within the Defense Department—particularly the Munitions Board and the Research and Development Board. Usually this coordination is accomplished through logistical and operational plans developed by the three services in support of Joint Chiefs of Staff plans. The Research and Development Board, for example, makes use of the Joint Chiefs of Staff estimates of the relative strategic importance of the various major types of military operations in assigning priorities for the development of weapons. In return, the Board supplies the Joint Chiefs of Staff with a forecast of the significant improvements that may be expected in the performance of our weapons, weapons systems and techniques over specified periods in the future.

Often overlooked is the fact that the Joint Chiefs of Staff possess command authority. This authority is exercised through the appropriate service, usually the one having primary interest. Thus the Chief of Staff of the Army is the Joint Chiefs' Executive Agent for the Far East Command while the Chief of Naval Operations is Executive Agent for the Pacific Command.

By law, the Chairman presides over the Joint Chiefs of Staff;

* Members of the Joint Chiefs of Staff include: General Omar N. Bradley, U. S. Army, Chairman; General J. Lawton Collins, Chief of Staff, U. S. Army; Admiral Forrest P. Sherman, Chief of Naval Operations; and General Hoyt S. Vandenberg, Chief of Staff, U. S. Air Force.

he prepares their agenda, but has no vote. He informs the Secretary of Defense, and, where appropriate, the President, of those issues upon which agreement among the Joint Chiefs has not been reached. In such cases, he presents the views of the three service chiefs but makes no formal recommendations of his own. Quite frequently, the Chairman represents the Joint Chiefs at Congressional hearings where he functions as a service-wide spokesman. While the Chairman takes precedence over all other active officers of the armed services, the law specifically provides that he "shall not exercise military command over the Joint Chiefs or over any of the military services."

In charting broad policies for strategic guidance of the military services, the Joint Chiefs have the direct assistance of the Deputy Chief of Staff of the Army for Plans, the Deputy Chief of Naval Operations for Operations, and the Deputy Chief of Staff of the Air Force for Operations. These deputies normally participate in all meetings of the Joint Chiefs.

To perform their staff, administrative and clerical work, the Joint Chiefs have a secretariat consisting currently of 50 Civil Service and 77 military personnel, not including service representatives acting in an advisory capacity. Finally, there is the Joint Staff, in which much of the Joint Chiefs' planning and coordinating activities center.

Department of Defense Photograph

Army, Navy and Air Force officers in a typical Pentagon briefing.

The Joint Staff has an authorized strength of 210 officers, all of whom, including the Director, are appointed by the Joint Chiefs of Staff in approximately equal numbers from the Army, Air Force, and Navy (including the Marine Corps). However the assigned strength of the Joint Staff is far below this figure at the present time.

The Joint Staff is not an operational staff in any sense; it functions only as a planning and coordinating agency of the Joint Chiefs of Staff. On it are only those officers who are engaged in *joint planning.* Thus an officer serving as a representative of a particular service or in a purely administrative capacity cannot be assigned to the Joint Staff. Members of the Joint Staff are expected to put aside service viewpoints in their overall planning for the national security. As a means of fostering this approach, Joint Staff officers are not responsible to their services but answer directly to the Director of the Joint Staff. The Director in turn is responsible to the Joint Chiefs.

The Director is charged with insuring that the necessary plans, estimates and studies on behalf of the Joint Chiefs are carried out. He is authorized to request assistance, as needed, from Defense Department and other Government agencies.

Within the Joint Staff are three main groups—Strategic Plans, Intelligence, and Logistics—each headed by a Deputy Director (see chart). The groups are broken down into working teams composed of three officers—one from each of the services.* Each is charged with some specialized function or planning program; for example, one team in the Strategic Plans Group is charged with matters pertaining to Alaska; a team in the Logistics Group concentrates on construction problems; and a team in the Intelligence Group is primarily responsible for intelligence estimates. A close working relationship prevails among these major groups. For example, although the Strategic Plans Group has primary responsibility for strategic planning, these plans must be based on logistic data furnished by the Logistics Group and intelligence furnished by the Intelligence Group.

Topping these three main groups are the joint Logistic Plans, Strategic Plans and Intelligence Committees. These Committees are composed of one representative from each of the services and the corresponding Deputy Director of the

* Naval representatives may be either Navy or Marine Corps officers in the ratio of 1 Marine to 6 Navy officers.

Joint Staff. These service representatives are assigned to the staff sections in their own services in the same field. For example, the Army member of the Strategic Plans Committee is generally the Chief of the Plans Division of G-3.

The plans prepared by the respective Groups are submitted to the appropriate Committees which in turn submit them to the Joint Chiefs of Staff. The service representative on each Committee uses his own service staff to advise and assist him with his review. An Army member, for example, would refer these Joint Staff plans to his own Army G-3 Division for rechecking. Through such an arrangement, the Joint Staff insures that its plans are feasible, according to impartial and objective standards.

Problems presented to the Joint Chiefs for decision may originate with one of the Chiefs; they may have their genesis in a request from the Secretary of Defense, the Secretary of State, or other Government executive; or they may be introduced by the Joint Staff Groups. The secretary of the appropriate Joint Chief of Staff Committee assigns the problem to a team within one of the Joint Staff Groups. The team prepares a report which is coordinated within the Joint Staff Group and then referred to the proper Committee for approval. Prior to this approval, the report undergoes careful examination by the services. Upon approval by the Committee, the report is passed to the Joint Chiefs of Staff for decision. At this stage, the report receives a final check by the Joint Chiefs' immediate advisers in each service.

In this process, it is apparent that there are many opportunities for differences of opinion to arise. Any differences not readily reconcilable may be written into the report as "splits" —by the team, the Group or the Committee. If the interested Committees and the Joint Chiefs of Staff themselves cannot resolve the remaining splits, the Chairman must report the facts of the disagreement to the Secretary of Defense. The Secretary of Defense (as the representative of the Commander-in-Chief), or where appropriate the President himself, then makes the decision—all within the provisions of the National Security Act Amendments of 1949. The great majority of questions, however, are resolved by the Joint Chiefs without dissension, and disagreements are actually rare.

In addition to its decisions having direct bearing on military strategic planning, the Joint Chiefs are frequently called upon through the Secretary of Defense to provide their authorita-

tive views on such questions as military aid to China, the Voice of America, proposed construction in oversea areas, United States global communications systems, and other matters affecting our foreign relations.

Underscoring the broad scope of its strategic thinking, the Joint Chiefs during 1949-50 toured the Far East, Alaskan and European Commands to inspect unified commands and military installations, ascertaining at first hand strategic and logistic needs and determining the state of readiness of forces under their command. Significantly, these trips are now a regular part of the Joint Chiefs' work, reflecting the global awareness that permeates the Joint Chiefs in their strategic planning for tomorrow's eventualities.

Department of Defense Photograph

Checking in at the Office of the Joint Chiefs of Staff, The Pentagon.

TRAINING FOR GUIDED MISSILE WARFARE

By

LIEUTENANT COLONEL GWINN U. PORTER

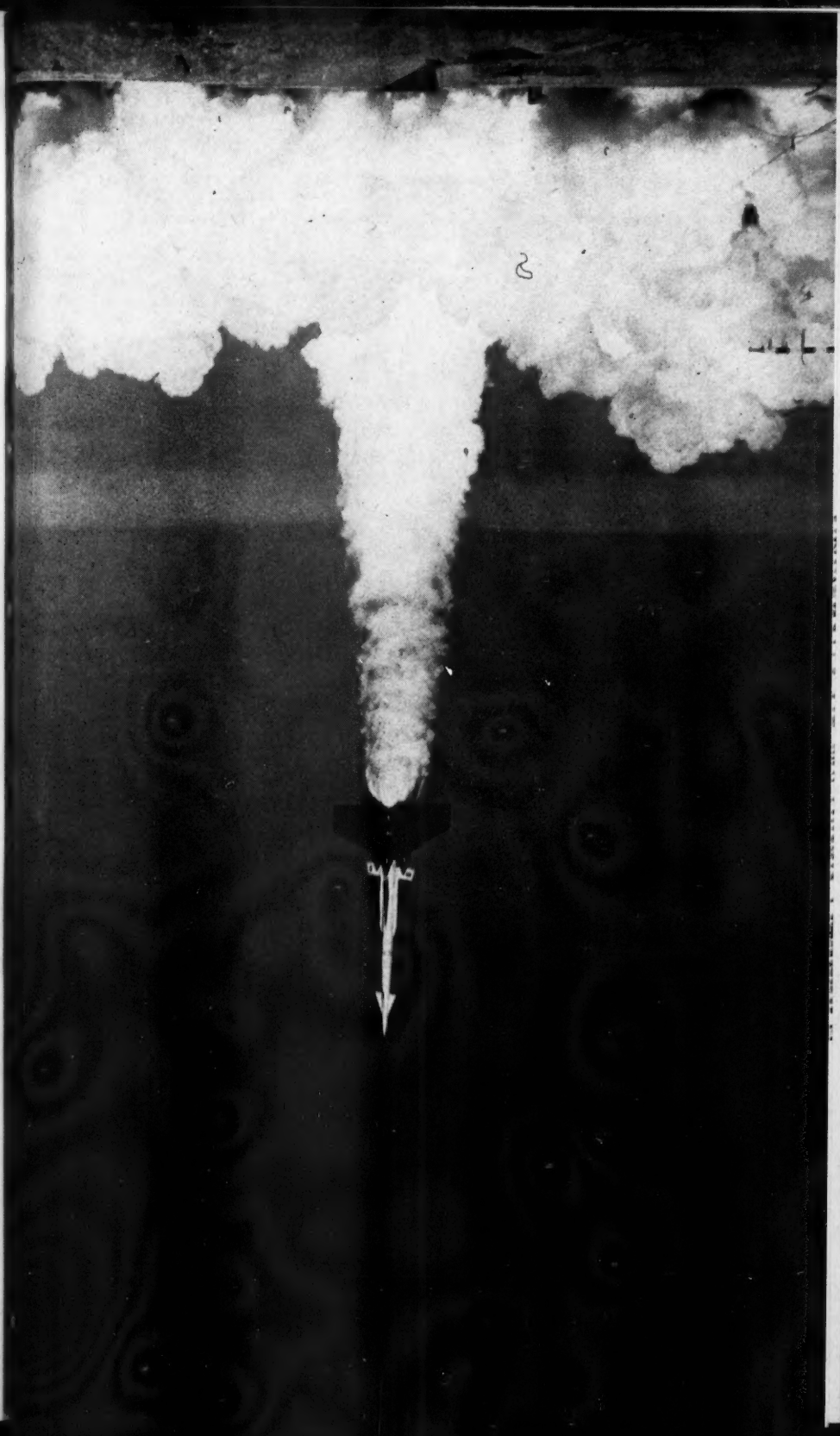
TRAILING a plume of smoke by day or a fiery arc by night, the guided missile in flight seemingly carries the observer on an eerie venture into the realm of fantasy. In reality this weird device represents one of the foremost military technological achievements—a weapon destined to influence vastly the outcome of future wars. But despite its great potential, the guided missile's effectiveness, like that of all military weapons, will be greatly influenced by the man who launches it on its mission of destructiveness.

An extremely complicated weapon which seems to streak through the stratosphere with disembodied ease, the guided missile actually depends for its accurate delivery at the unseen target on a team of technicians at some remote launching site. Synchronizing alertness and teamwork with the latest in scientific development, these men are bringing the wizardry of guided missile warfare within the realm of practical reality.

Since World War II almost all guided missile experimentation has been conducted by civilian engineering firms under contract from the Armed Forces. Army Field Forces troops have participated in the development program in conjunction with these agencies and with other military services. The first of these AFF units was the 1st Antiaircraft Guided Missile Battalion which sweated and strained with captured German V-2s at White Sands Proving Ground for three years learning the rudiments of the art. In 1948, the battalion was expanded into the 1st Guided Missile Regiment and continued to assist the guided missile developing agencies.

The regiment, by following the development work of the

LIEUTENANT COLONEL GWINN U. PORTER, GSC, of G-3 Section, Office, Chief, Army Field Forces, prepared this article in collaboration with members of the 1st Guided Missile Group, Fort Bliss, Texas.



Army, Navy and Air Force, has provided a reservoir of highly trained officers and enlisted men who qualify for Army Field Forces cadres, for use as service test troops, and for the eventual formation of operational guided missile units. Troops of the regiment have been stationed with Navy experimenters at Point Mugu and China Lake, California, and at White Sands and Fort Bliss with the Army Ordnance Department. The mission assigned these troops was in general "to assist the Ordnance Department, Navy and Air Force in the development of missiles of interest to the Army Field Forces." Assistance agreements for on-the-job training were usually drawn up locally.

Experience has proved that this on-the-job training is only partially satisfactory since soldiers with the requisite technical skills were difficult to find. It became obvious that steps must be taken to overcome this handicap in the average soldier who, after all, is the man who will handle and fire these weapons in combat.

An important step in this direction was taken recently. Anticipating the imminent fruition of the development program for operational guided missiles, the 1st Guided Missile Regiment has been replaced by the much more flexible 1st Guided Missile Group. This move brings guided missile training under control of the Army, and although on-the-job training with civilian contractors will continue, the major part of all advance individual training will be conducted by the Group.

Disregarding for the time being the tactical problems arising from the employment of guided missiles, the problem of advanced individual training is fundamentally one of deriving from the civilian scientist and engineer the essential elements of guided missile knowledge and skill and transferring them to the average soldier.

Just how much technical knowledge must the operating man—the combat soldier—have to keep these missiles flying? Two points of view immediately require attention. The prevailing system of technical support—the one relied upon during World War II—is to relieve the front-line soldier from as much technical responsibility as possible. Opposing this doctrine is the view that with the complex weapons and equipment of today and with the alarming shortage of qualified maintenance technicians, somebody other than the maintenance specialist has to help get the work done or the Army's combat effectiveness will suffer. This would entail a more thorough training of the soldier in combat units. If the better trained

soldier can remedy most of the breakdowns in his equipment on the spot, and if he is trained to a keen appreciation of the weapons, their capabilities as well as limitations, then the usefulness of guided missiles will be increased with a consequent saving of time, money, lives and perhaps a war.

If future events prove that too much attention is being given to the technical training of enlisted men in the combat units, nothing will have been lost. These men will be welcome in the Technical Services any time they can be spared.

Drawing on Germany's wartime experience, it is evident that launching personnel should be extremely well trained technically. There was little difference, for example, in the abilities of the rear echelon and the front-line troops in the German guided missile organization.

Before an enlisted man can become a proficient guided missile artilleryman, he must be trained previously in several valuable, everyday skills. Some of these skills may be acquired in regular courses of the service schools; others must be taught in advanced troop schools. However, these five fundamental skills, among others yet to be discovered, are those in which a guided missile artilleryman must be competent regardless of his future Military Occupational Specialty: welding, soldering, sheet metal working, electronic circuits and testing, and use of hand and machine tools.

Advanced individual training in guided missiles is conducted in two phases. Phase I provides preliminary, generalized training and indoctrination, and qualifies personnel to proceed to Phase II work on specific guided missiles. Included in Phase I training are fundamental theory (modified for average soldier consumption and limited in nature), hand skills in mechanics and electronics, and study of prototype equipment and missiles. Phase II involves training for the support and operational use of specific guided missiles and allied equipment and includes specialist training. Currently it is planned to conduct all of Phase I and most of Phase II in troop schools with specialist training being carried on concurrently in the service schools. Those men assigned to specialist training will receive their preliminary indoctrination at the service school prior to engaging in specialist study.

Sometime during Phase I it will become desirable to send small groups of potential instructor personnel, both officer and enlisted, to a contractor's manufacturing plant to obtain first-hand training on prototype operational equipment. This will

be done before a missile comes up for service test and evaluation. The final advanced technical training required by the supporting service, such as Ordnance or Signal training, probably will be undertaken after acceptance of the weapon by the Army.

Phase I individual training is the most important part of the entire program. During this phase, while he is developing an appreciation of mechanical and electronic equipment, the trainee learns to use his head and his hands. He is taught the capabilities and limitations of guided missile equipment, metals, materials, motors, electronic circuits and everything with which he will be working on the battlefield. He will, in the future, treat an expensive item of equipment as if it were the finest creation of the human mind. He will respect his weapons and will get the most out of them. All of this will be in addition to the ability he will have acquired to repair, maintain and operate, on the user level, all of the allied equipment which goes with guided missiles.

Phase I training techniques are still in the experimental stage. New methods of approach to the man and his potentialities are being investigated and tested. It is believed that the average soldier, regardless of his capabilities upon enlistment, can be taught a great deal of practical mechanical and electronic skill if he is not overwhelmed with frightening complexities, mathematical equations and theoretical discussions. Theory is being simplified and reduced to terms which are understandable to the soldier in the light of his own experience. Technical names and terms are described in their true meanings. In short, the emphasis is on teaching the man, not showing off the instructor.

The 1st Guided Missile Regiment produced a few highly qualified experts who are available today as instructors. Needless to say, these instructors have a sizeable job cut out for them. They will no doubt be overworked until the new system regenerates and propagates guided missile doctrine among all the new-type artillerymen. Some of these instructors will go to the Guided Missile Department of the Antiaircraft and Guided Missile Branch of the Artillery School, Fort Bliss, to teach specialists on operational equipment.

According to present plans, Phase I training will qualify the soldier to engage in guided missile work alongside the civilian engineer. After serving his apprenticeship, the soldier will then go to a contractor's factory for a long period of school-

ing. Upon his return he becomes a valuable instructor and the training cycle will start over again with new men.

Guided missiles and allied equipment are expensive and training aids are difficult to obtain. Therefore, in conducting Phase I instruction, effective use has been made of obsolete guided missile equipment, old test missiles and salvaged items. Old electronic equipment is especially useful, enabling soldiers to learn the testing of circuits and the theory and practice of unit assembly, maintenance and repair. Surplus equipment which would have been junked at a fraction of its real value is being used in troop schools, saving thousands of dollars by obviating the purchase of new equipment.

The limited amount of money that is available for guided missile training is being spent carefully for selected items of critical equipment and some few missiles. Interservice cooperation is making a number of training films available, most of these dealing with development missiles.

The experience of the 1st Guided Missile Regiment indicates that two years is required to train a good cadre for a new unit. It is likely that this period may be lessened as more effective and incisive training methods are discovered and proved. Under present training schedules, basic training requires 13 weeks; preliminary indoctrination in guided missiles, 8 weeks; and service schooling, 5 to 52 weeks, depending upon the soldier's Military Occupational Specialty and his need for instruction in basic skills. Twenty-four weeks are devoted to advanced individual training, and 36 weeks to unit training. Thus the minimum time needed to complete the prescribed courses is 86 weeks, with the maximum ranging up to 133 weeks.

Recommendations recently have been submitted calling for the inclusion of guided missile personnel within the Artillery career field. Although the exact specifications for guided missile jobs are not firm as yet, and the duties of various members of squads and sections sometimes overlap due to the requirement of having every man assist every other man, it is expected that clear-cut job definitions can be written within a few months. Meanwhile, the officers and enlisted men of the guided missile units are enthusiastic over their assignments. They feel that they are in on the ground floor of a big, new, exciting business. The high state of their morale is reflected in the large percentage of reenlistments within the group.

PEACETIME MILITARY GOVERNMENT TRAINING

By

LIEUTENANT COLONEL GEORGE F. HAVELL

EVER since the war with Mexico, the aftermath of victory has found American military commanders involved to a greater or less degree with problems affecting or caused by the civilian population of the conquered territory.

Enemy prisoners, stragglers and sick and wounded are relatively easy to manage. Military police, guard companies and medical units are organized and prepared to handle them as required by international law. But the noncombatant civilian population constitutes an entirely different problem. Food, clothing, housing, sanitation, law and order, the functioning of local government and business—these are only a few of the enigmas which a military commander in enemy territory has to solve quickly and effectively. Sometimes they rise to plague him in combat even while his own units are capturing towns and cities as they advance.

The necessity for some measure of control over the civilian inhabitants of theaters of operations is about as old as warfare itself. The formal obligations imposed in this connection by custom and international law upon the commander of the occupying force are of more recent origin. Yet until World War II, the manifest advantages of using specially trained personnel for this difficult aspect of the military mission had been ignored.

When allied armies on both sides of the globe assumed the offensive in World War II, the problems which faced Eisen-

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hower and MacArthur were the same ones, multiplied a thousand-fold, which faced their counterparts in previous wars. But there was this difference. World War II armies marched ahead with trained military government units attached. As the combat troops advanced, a military government unit was frequently dropped off in each captured city, prepared to take over—for as long as might be necessary—complete control of the community, its government, its business, its people.

From a military point of view, this relieved the troop commander of responsibility for the city; it provided him with a certain amount of rear guard security; and it offered a convenient and effective means of making local labor—and in some cases supplies—immediately available. From the humanitarian standpoint, it meant that immediate steps were taken to return people to their homes or to provide them with temporary shelter, to furnish them with food and clothing as required, and to restore as rapidly and as completely as possible an orderly and productive way of life.

The ultimate necessity for some form of military government organization became obvious early in World War II. In 1942 a Civil Affairs Division of the War Department was set up as a Special Staff division; a training program under the direction of the Provost Marshal General was instituted; the School of Military Government was established at the University of Virginia in Charlottesville; and Civil Affairs Training schools (quickly dubbed CAT schools) were organized in selected universities throughout the country. At Charlottesville, the course was directed primarily toward the military, legal and logistical aspects of occupation during and immediately after combat. Instruction was based largely on FM 27-5, Civil Affairs-Military Government, and FM 27-10, Rules of Land Warfare. At the Civil Affairs Training schools, area training covered the language, history, geography, ethnology, industry, government, religion, social customs, education and the like of specific countries.

Originally those selected for military government training were officers whose records showed qualifications for high level staff duty. But as the area of combat grew, the personnel requirements expanded. Experiences in Africa and in the Mediterranean area quickly proved that military government could not function effectively from the ivory tower of a high headquarters. Grass roots operation by military government personnel stationed in the smallest municipalities was essen-

tial. Furthermore, military government operations had to be far more inclusive than mere restoration of law and order and reorganization of governmental offices. Rehabilitation of the economic system, reopening of schools, control of sanitation and public health and similar activities were pressing requirements. Normally these are not fields in which military personnel are experts. It became necessary therefore to find civilian specialists in agriculture, fishing, public health, transportation, education, banking, public utilities and manufacturing who could be given direct commissions and assigned to the various military government schools for training. Even then the numerical requirements were not fulfilled. As military government operations expanded, particularly in Germany, volunteers were called for from personnel serving with troops, and others were arbitrarily assigned.

Ultimately many thousands of Army, Navy and Air Force personnel found themselves in military government assignments, some by choice, some by compulsion; some professionally and temperamentally fitted for such duties, some obvious misfits; some well trained for military government assignments, some with little or no training. Policy and operational responsibility and authority were not always clearly defined, notably between the military establishment and the State Department, between military personnel and civilian employees of military government and between local military government officers and native municipal officials. Even the terminology varied—"civil affairs" in liberated friendly areas, "military government" in conquered enemy countries. But at least the principle was recognized, of earmarking qualified military personnel for specialized military government assignments.

Despite the frustrations under which military government officers labored and the failures which were charged against them, they must also be credited with notable successes. Certainly without the control, guidance, assistance and leadership which military government provided, progress in the rehabilitation of occupied territories and their inhabitants would have been immeasurably slower and vastly more complicated. In World War II military government asserted itself as an integral part of successful combat operations and as an equally vital post-combat stimulant. It is inconceivable that this aspect of modern warfare will ever again be ignored or belittled, for any future war will certainly involve whole populations.

To assume that the mission of military government units is

now fully appreciated throughout the armed services would be decidedly premature. One of the major problems of the occupation phase of World War II was the mutual lack of understanding of each other's mission and methods on the part of many military government personnel and troop commanders. Too little information was given to the troops to permit them to understand the functions and operations of a military government unit. Similarly, too many military government personnel were lacking in sufficient military background and experience.

The aim of peacetime military government training is, therefore, threefold: (1) To indoctrinate every Army officer with a knowledge of what military government is, the necessity for it, the principles on which it operates and how those principles are applied; (2) To have a nucleus of personnel of the Regular Establishment trained and available for military government staff duty or for the organization of units on M-day; and (3) To have in the Organized Reserve Corps individuals and units trained and organized to fill initial military government needs upon mobilization.

Toward the accomplishment of these objectives, definite action has been taken. Instruction in military government theory and practice has been introduced into the curricula of the Command and General Staff College and the United States Military Academy as well as schools of the arms and services.

Training in military government functions and operations has been made a responsibility of the Provost Marshal General. Under T/O&E 41-500, published in June 1948, provision has been made for organizing basic types of units. While strengths will vary, one of the several units which may be used is the military government group with a strength of 66 officers and 166 enlisted personnel under the command of a colonel and with both administrative and operational functions. Under the group commander there will be any required number of military government companies each composed of 52 officers and 152 enlisted personnel commanded by a lieutenant colonel and organized into platoons. To provide the highest degree of flexibility, each of these basic types of units will be cellular in structure so that cells may be added, subtracted or combined with other cells to meet the requirements of any given situation. Each individual cell will be organized, trained and equipped to perform as a technical, service or housekeeping unit. Thus the ad hoc concept of military government organization so widely prevalent during World War II has been

abandoned. Instead, future military government units and personnel will be organized, trained and assigned according to carefully prepared plans.

The first military government units ever activated in the United States Army in peacetime—the 95th Military Government Group and the 28th and 29th Military Government companies—were organized at Fort Bragg in October 1948 under the G-5 section of V Corps. Each has about 60 per cent of its prescribed strength. They are serving as pilot units for training and demonstration purposes and are available for carrying out military government phases of maneuvers. Study is now being made of the requirements of military government staff sections for armies, corps and divisions.

Considerable progress in building a peacetime military government organization has been made in the Organized Reserve Corps. Some ORC units are organized as T/O&E military government groups and companies. Each of the six Army Areas is authorized to maintain training units and to form a Unit Training Center unit as well as a Military Government School unit. In addition, each ORC and National Guard Division has a military government staff section. Thus several thousand citizen soldiers are available to the Army for the serious responsibility of military government.

The first training directive for Reserve military government units (Annex XVII to Army Field Forces Training Memorandum No. 1, dated 23 June 1948 and its amendment) places considerable emphasis on basic military training for military government personnel in order to correct one of the great weaknesses of the wartime training program. While no specific consideration was given to area or language training, the directive gives unit commanders sufficient latitude to permit them to expand their training programs, and many have done so.

The 403d Military Government Company, for example, activated in Syracuse, New York, in December 1948, now has assigned to it 40 officers and 30 enlisted personnel—six of them members of the Women's Army Corps. Ten of the officers had wartime military government experience. Recruiting of personnel for this unit has been highly selective, particular emphasis having been placed on the individual's MOS and civilian occupation. As a result, members of the unit are actually qualified to perform functional military government specialist duties.

Initially the training program of this company concentrated on basic military and military government subjects varied by occasional area studies and panel presentations. For the past six months a professor of government at Syracuse University who was formerly assistant director of instruction at the School for the Government of Occupied Areas at Carlisle Barracks, Pennsylvania, has given the unit a college-level course in military government.

Other units throughout the country have varied their basic programs by Command Post Exercises, week-end training sessions and 15-day summer training tours. These camp tours will be considerably expanded this Summer.

The revised training program for Reserve military government units is now in the final stages of preparation in the Office of the Chief, Army Field Forces. It will provide progressive training over a three-year period. Heavy emphasis will be placed on enhancing the military proficiency of personnel and units to equal that of combat troops.

But the most efficient organization, the most thorough training, will avail little if the caliber of the personnel is even slightly less than the best. Military government is peculiarly an area of human relations into which untrained fools must never be permitted to rush and even well-qualified angels must tread lightly. Relations between opposing armies are mass relations and remote. Relations between military government personnel and the civilian population of occupied countries are individual and direct. To the people of the occupied territory, military government personnel are more than members of a conquering army. They are representatives of the entire United States Government and are recognized—and judged—as such. They must be stern masters or indulgent ones as the situation of the moment requires. They must be ready to invoke the law and—even more—to obey it themselves. They must operate by the dictates of head and heart just as much as by the precepts of the book. Their dealings with conquered and conquerors alike must be conspicuously flavored with firmness and fairness. Their personal character and conduct must be above reproach, because only insofar as they exhibit by their own actions the philosophies and standards of honesty, impartiality, law abidance and respect for the rights and property of others which the United States Government and its people uphold, only so far can they expect these philosophies and standards to be embraced by others.